



# **Appendix Mountain View Street Condominiums 301 & 305 North Mountain View Street**

Prepared for  
**City of Santa Ana  
Planning and Building Agency  
Contact: Jerry Guevara**

Prepared by  
  
**300 Spectrum Center Drive Suite 400  
Irvine, CA 92618  
Lori Trotter, AICP CEP**

JUNE 8, 2020



Appendices for the  
Initial Study Mitigated Negative Declaration  
  
for  
  
Mountain View Street Condominiums  
301 & 305 North Mountain View Street

*Prepared for*  
City of Santa Ana  
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Contact: Jerry Guevara

*Prepared by*



300 SPECTRUM CENTER DRIVE SUITE 400 IRVINE, CA 92618  
LORI TROTTIER, AICP CEP

**JUNE 8, 2020**



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# Appendix A:

## Air Quality





February 28, 2020

Ms. Lori Trottier, Environmental Project Manager  
INFRASTRUCTURE ENGINEERING CORPORATION  
300 Spectrum Center Drive, Suite 400  
Irvine, California 92618

**Re: 301 North Mountain View Street Air Quality, Greenhouse Gas, & Energy Technical Memorandum  
19237**

Dear Ms. Trottier:

**INTRODUCTION**

The firm of Ganddini Group, Inc. is pleased to provide this air quality, greenhouse gas, and energy technical memorandum for the proposed 301 & 305 Mountain View project. The 32,400 square foot proposed development site is located at 301 and 305 Mountain View Avenue in the City of Santa Ana. A vicinity map and project location map, showing the project's location, are provided on Figures 1 and 2 respectively. A glossary is provided in Appendix A to assist the reader with technical terms related to air quality analysis.

**PROJECT DESCRIPTION**

The proposed project involves demolishing two (2) existing single-family residential dwelling units and development of eight (8) condominium dwelling units. Figure 3 shows the proposed project site plan.

The project also involves a General Plan Amendment and Zone Change for the development site and adjacent properties to the north and south between 5th Street and 1st Street to bring the subject properties into compliance. The existing land use designations consist of approximately 7.2 acres of Low-Medium Density Residential (LMR-11) and 1.6 acres of General Commercial (GC). The proposed land use designations consist of approximately 6.6 acres of Medium Density Residential (MR-15) and 2.1 acres of Low Density Residential (LR-7).

**AIR QUALITY AND GREENHOUSE GAS EMISSIONS**

The air quality and greenhouse gas emissions generated by the demolition of the existing uses and the construction/operation of the proposed project were modeled using CalEEMod 2016.3.2. Operational emissions associated with the existing uses (to be removed) were also analyzed in CalEEMod. The CalEEMod output is provided in Appendix B.

**ENERGY ANALYSIS**

Section 15126.2 of the CEQA Guidelines, states that potential energy impacts must be considered in an Environmental Impact Report (EIR). Although, this Project does not require an EIR, energy impacts have been analyzed for discussion purposes.



The project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with these measures would result in a more efficient use of construction-related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

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 shown in the CalEEMod output (please see Appendix B), the project would use up to 102,077 kBtu/year of natural gas and 33,281 kWh/year of electricity. Operational energy would also be consumed during vehicle trips associated with the project. Residents and visitors associated with the proposed residential development would primarily relate fuel consumption to vehicle use. The proposed project's buildings 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.

Therefore, project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the project can be accommodated within the context of available resources and energy delivery systems. The project would therefore not cause or result in the need for additional energy producing or transmission facilities. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservation goals within the State of California. Notwithstanding, the project proposes self-storage facility uses and will not have any long-term effects on an energy provider's future energy development or future energy conservation strategies.

## CONCLUSIONS

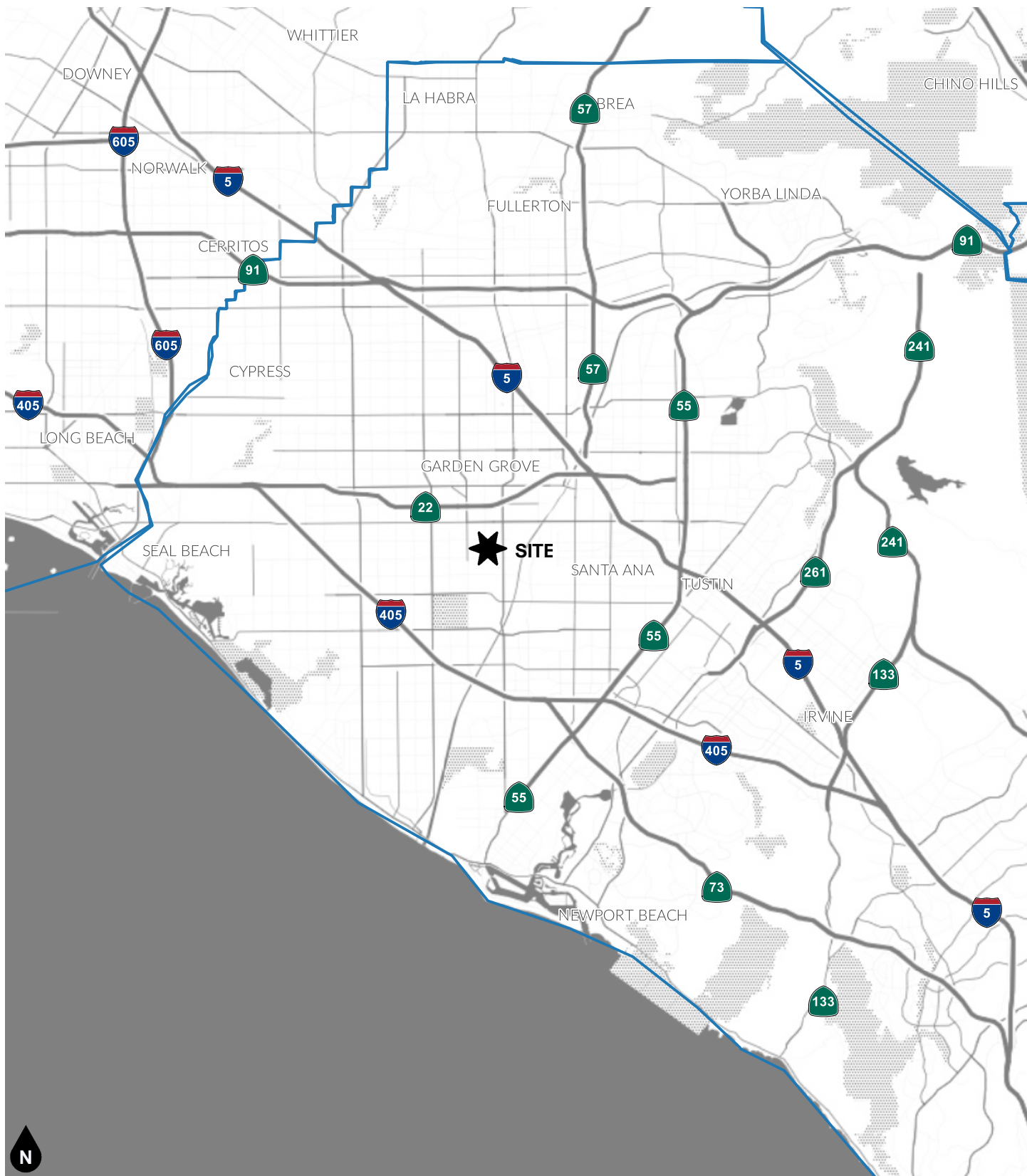
It has been a pleasure for Ganddini Group, Inc. to service your needs on the proposed 301 and 305 Mountain View project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100.

Respectfully submitted,



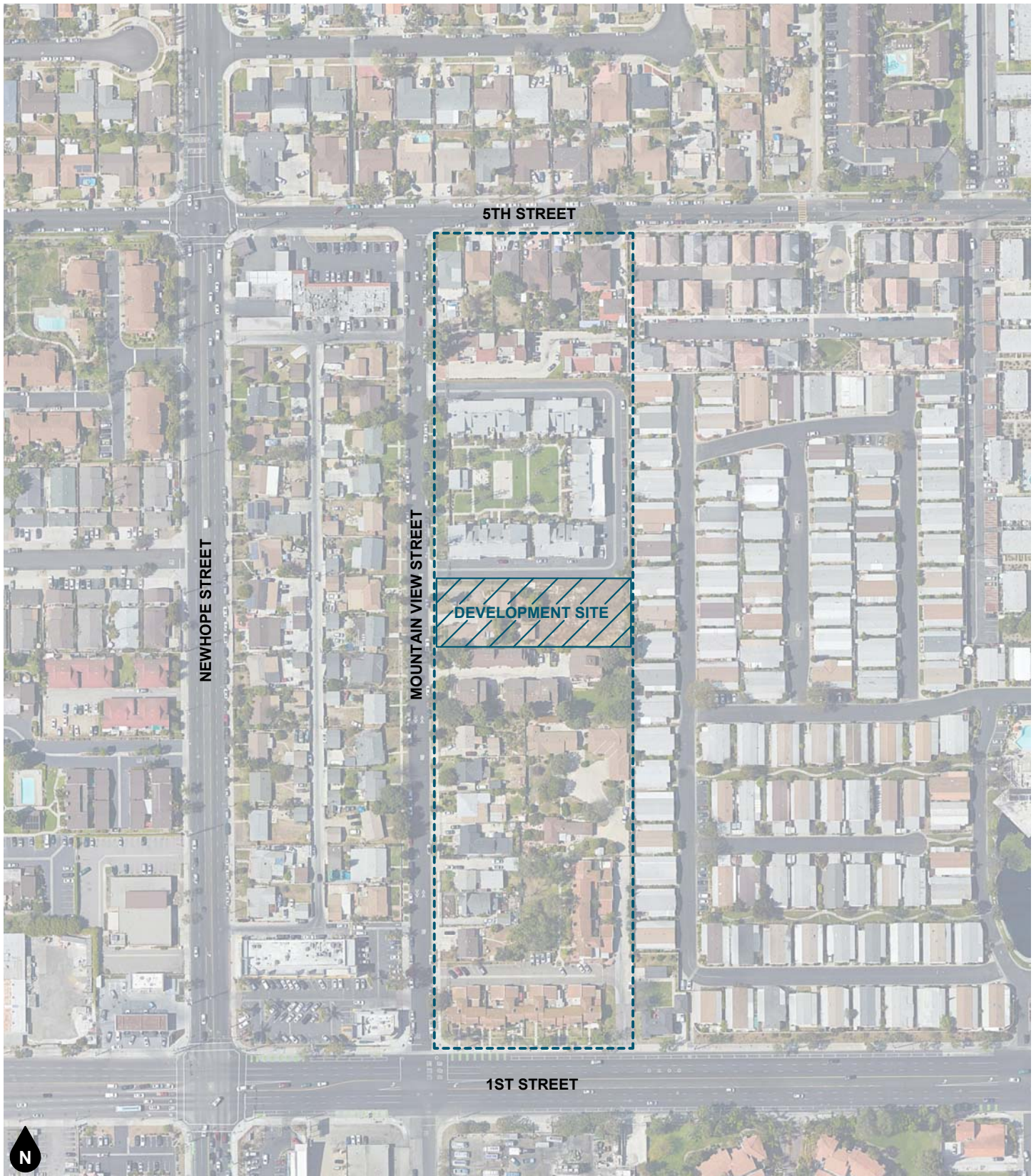
Katie Wilson, M.S.  
Senior Air Quality Analyst

19237



**Figure 1**  
**Regional Vicinity**

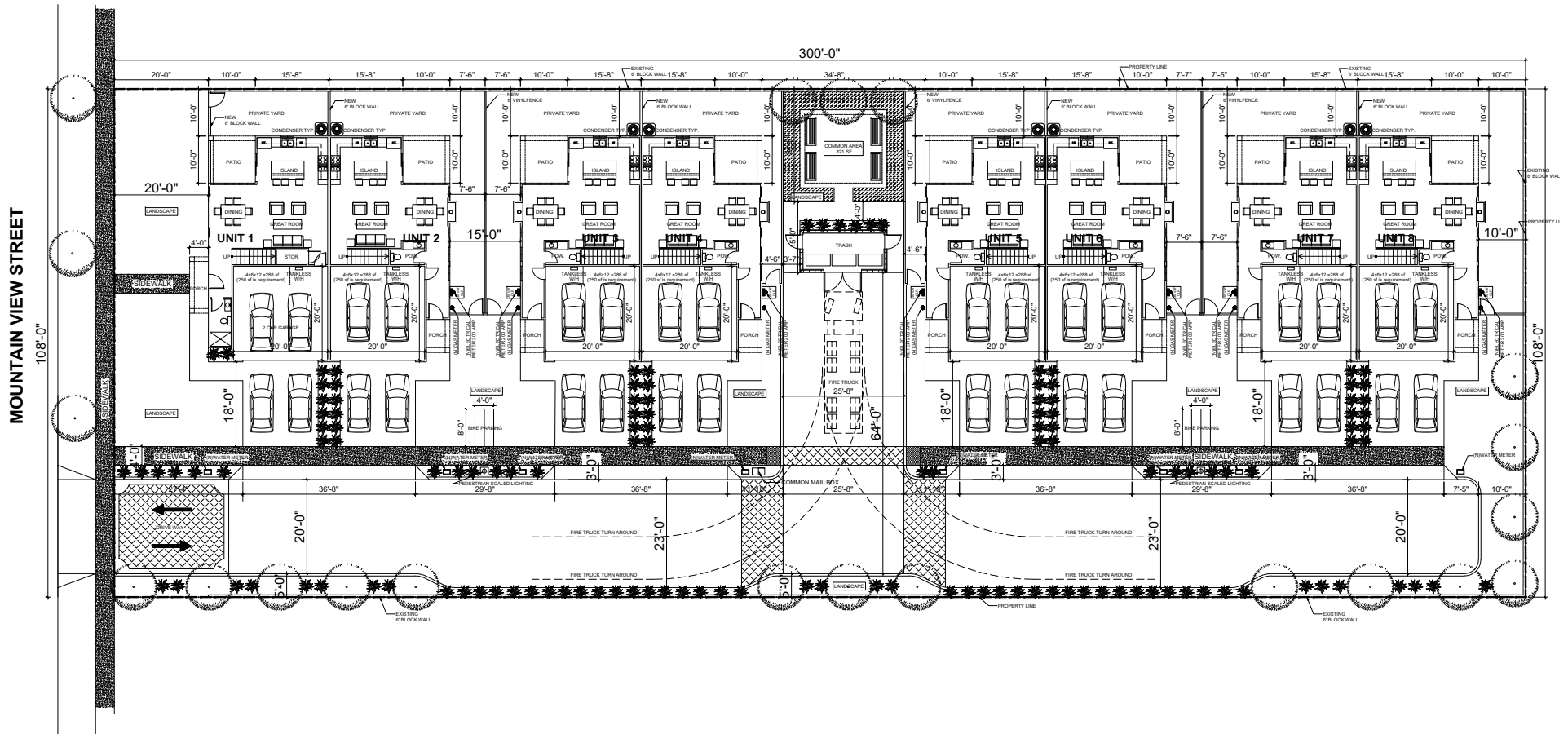




Legend

----- General Plan Amendment Boundary

**Figure 2**  
**Project Location Map**



**Figure 3**  
**Proposed Site Plan**

Source: ANHA Design Studio



301 North Mountain View Street  
Air Quality, Greenhouse Gas, & Energy Technical Memorandum  
19237

## **APPENDIX A**

### **GLOSSARY OF TERMS**

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH <sub>4</sub>	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
MTCO <sub>2</sub> e	Metric tons of carbon dioxide equivalent
MMTCO <sub>2</sub> e	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO <sub>x</sub>	Nitrogen Oxides
NO <sub>2</sub>	Nitrogen dioxide
N <sub>2</sub> O	Nitrous oxide
O <sub>3</sub>	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM <sub>10</sub>	Particles that are less than 10 micrometers in diameter
PM <sub>2.5</sub>	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SANBAG	San Bernardino Association of Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SSAB	Salton Sea Air Basin
SF <sub>6</sub>	Sulfur hexafluoride
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

**APPENDIX B**

**CALEEMOD MODEL EMISSIONS PRINTOUTS**



19237 301 &amp; 305 Mountain View - Orange County, Summer

**19237 301 & 305 Mountain View**  
**Orange County, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	8.00	Dwelling Unit	0.20	18,152.00	23
Other Asphalt Surfaces	0.15	Acre	0.15	6,534.00	0
Other Non-Asphalt Surfaces	0.39	Acre	0.39	16,988.40	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			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

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

## Project Characteristics -

Land Use - 32,452 sf (~0.74 ac) site w/ 8 condo DUs (total building square footage = 18,152 sf & building footprint = 8,744 sf), ~20% of site (~0.15 ac) paving on-site driveways/roadways, & remainder landscaping/hardscape (~0.39 ac).

Construction Phase - Anticipated start date of September 2020 with completion by the end of December 2021.

Off-road Equipment - Site preparation of only up to ~50% of the site to remove existing hardscape, trees, and landscaping associated with existing residential uses; therefore, only ~50% of CalEEMod default equipment for site preparation needed.

Grading - Site anticipated to balance. Site prep of only ~50% of site (~0.37 ac) to remove existing hardscape/trees/landscaping associated with existing residential uses.

Demolition - Existing residential buildings of ~3,165 square feet to be demolished.

Vehicle Trips - Per Trip Generation Analysis, 7.32 trips per DU per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Up to ~15-20 trees to be planted; therefore, to be conservative, used lower estimate of ~15.

## Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~10.81 DU/Acre. Site is ~0.13 miles NE of OCTA Rte 64 Stop 1st-Newhope & ~3.4 miles NW of downtown Santa Ana.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	283.00
tblConstructionPhase	NumDays	10.00	28.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	1.00	3.00
tblConstructionPhase	PhaseEndDate	2/18/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	2/4/2021	11/23/2021
tblConstructionPhase	PhaseEndDate	9/14/2020	10/8/2020
tblConstructionPhase	PhaseEndDate	9/17/2020	10/22/2020
tblConstructionPhase	PhaseEndDate	2/11/2021	12/13/2021

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

tblConstructionPhase	PhaseEndDate	9/15/2020	10/13/2020
tblConstructionPhase	PhaseStartDate	2/12/2021	12/14/2021
tblConstructionPhase	PhaseStartDate	9/18/2020	10/23/2020
tblConstructionPhase	PhaseStartDate	9/16/2020	10/14/2020
tblConstructionPhase	PhaseStartDate	2/5/2021	11/24/2021
tblConstructionPhase	PhaseStartDate	9/15/2020	10/9/2020
tblFireplaces	NumberGas	6.80	7.20
tblFireplaces	NumberWood	0.40	0.00
tblGrading	AcresOfGrading	0.00	0.37
tblLandUse	LandUseSquareFeet	8,000.00	18,152.00
tblLandUse	LotAcreage	0.50	0.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblSequestration	NumberOfNewTrees	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	0.40	0.00
tblWoodstoves	NumberNoncatalytic	0.40	0.00

## 2.0 Emissions Summary

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## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**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					
2020	0.9392	9.4119	8.0487	0.0144	0.8645	0.5263	1.3325	0.4434	0.4843	0.8898	0.0000	1,412.949 5	1,412.949 5	0.3717	0.0000	1,422.241 2
2021	8.8099	8.4890	7.8769	0.0143	0.2108	0.4497	0.6605	0.0566	0.4137	0.4704	0.0000	1,405.963 1	1,405.963 1	0.3710	0.0000	1,415.236 7
Maximum	8.8099	9.4119	8.0487	0.0144	0.8645	0.5263	1.3325	0.4434	0.4843	0.8898	0.0000	1,412.949 5	1,412.949 5	0.3717	0.0000	1,422.241 2

**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					
2020	0.9392	9.4119	8.0487	0.0144	0.4054	0.5263	0.8733	0.1910	0.4843	0.6374	0.0000	1,412.949 5	1,412.949 5	0.3717	0.0000	1,422.241 2
2021	8.8099	8.4890	7.8769	0.0143	0.2108	0.4497	0.6605	0.0566	0.4137	0.4704	0.0000	1,405.963 1	1,405.963 1	0.3710	0.0000	1,415.236 7
Maximum	8.8099	9.4119	8.0487	0.0144	0.4054	0.5263	0.8733	0.1910	0.4843	0.6374	0.0000	1,412.949 5	1,412.949 5	0.3717	0.0000	1,422.241 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	42.70	0.00	23.04	50.48	0.00	18.56	0.00	0.00	0.00	0.00	0.00	0.00

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**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	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Energy	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Mobile	0.0866	0.3479	1.1870	4.6500e-003	0.4245	3.3000e-003	0.4278	0.1135	3.0700e-003	0.1166		472.2620	472.2620	0.0187		472.7295
<b>Total</b>	<b>0.5242</b>	<b>0.5007</b>	<b>1.9096</b>	<b>5.6100e-003</b>	<b>0.4245</b>	<b>0.0187</b>	<b>0.4432</b>	<b>0.1135</b>	<b>0.0185</b>	<b>0.1320</b>	<b>0.0000</b>	<b>658.8226</b>	<b>658.8226</b>	<b>0.0234</b>	<b>3.4000e-003</b>	<b>660.4203</b>

**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	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Energy	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Mobile	0.0745	0.2781	0.8484	3.1400e-003	0.2815	2.3000e-003	0.2838	0.0753	2.1300e-003	0.0774		319.4635	319.4635	0.0132		319.7943
<b>Total</b>	<b>0.5121</b>	<b>0.4309</b>	<b>1.5710</b>	<b>4.1000e-003</b>	<b>0.2815</b>	<b>0.0177</b>	<b>0.2992</b>	<b>0.0753</b>	<b>0.0175</b>	<b>0.0928</b>	<b>0.0000</b>	<b>506.0240</b>	<b>506.0240</b>	<b>0.0179</b>	<b>3.4000e-003</b>	<b>507.4851</b>



## 19237 301 &amp; 305 Mountain View - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.31	13.93	17.73	26.92	33.69	5.35	32.49	33.69	5.09	29.69	0.00	23.19	23.19	23.38	0.00	23.16

**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	9/1/2020	10/8/2020	5	28	
2	Site Preparation	Site Preparation	10/9/2020	10/13/2020	5	3	
3	Grading	Grading	10/14/2020	10/22/2020	5	7	
4	Building Construction	Building Construction	10/23/2020	11/23/2021	5	283	
5	Paving	Paving	11/24/2021	12/13/2021	5	14	
6	Architectural Coating	Architectural Coating	12/14/2021	12/31/2021	5	14	

**Acres of Grading (Site Preparation Phase): 0.37****Acres of Grading (Grading Phase): 0****Acres of Paving: 0.54****Residential Indoor: 36,758; Residential Outdoor: 12,253; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,411 (Architectural Coating – sqft)****OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	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	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1113	0.0000	0.1113	0.0169	0.0000	0.0169			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.235 2	1,147.235 2	0.2169		1,152.657 8
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.1113</b>	<b>0.4672</b>	<b>0.5785</b>	<b>0.0169</b>	<b>0.4457</b>	<b>0.4625</b>		<b>1,147.235 2</b>	<b>1,147.235 2</b>	<b>0.2169</b>		<b>1,152.657 8</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.2 Demolition - 2020****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	3.7800e-003	0.1375	0.0347	3.8000e-004	8.7100e-003	4.5000e-004	9.1500e-003	2.3800e-003	4.3000e-004	2.8100e-003		42.6529	42.6529	4.4200e-003		42.7634
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
<b>Total</b>	<b>0.0422</b>	<b>0.1617</b>	<b>0.3621</b>	<b>1.4700e-003</b>	<b>0.1205</b>	<b>1.1900e-003</b>	<b>0.1217</b>	<b>0.0320</b>	<b>1.1100e-003</b>	<b>0.0331</b>		<b>151.6573</b>	<b>151.6573</b>	<b>6.9000e-003</b>		<b>151.8299</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0434	0.0000	0.0434	6.5700e-003	0.0000	6.5700e-003			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.0434</b>	<b>0.4672</b>	<b>0.5106</b>	<b>6.5700e-003</b>	<b>0.4457</b>	<b>0.4522</b>	<b>0.0000</b>	<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.2 Demolition - 2020****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	3.7800e-003	0.1375	0.0347	3.8000e-004	8.7100e-003	4.5000e-004	9.1500e-003	2.3800e-003	4.3000e-004	2.8100e-003		42.6529	42.6529	4.4200e-003		42.7634
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
<b>Total</b>	<b>0.0422</b>	<b>0.1617</b>	<b>0.3621</b>	<b>1.4700e-003</b>	<b>0.1205</b>	<b>1.1900e-003</b>	<b>0.1217</b>	<b>0.0320</b>	<b>1.1100e-003</b>	<b>0.0331</b>		<b>151.6573</b>	<b>151.6573</b>	<b>6.9000e-003</b>		<b>151.8299</b>

**3.3 Site Preparation - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1308	0.0000	0.1308	0.0141	0.0000	0.0141			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
<b>Total</b>	<b>0.2095</b>	<b>2.1052</b>	<b>2.2797</b>	<b>3.1100e-003</b>	<b>0.1308</b>	<b>0.1331</b>	<b>0.2639</b>	<b>0.0141</b>	<b>0.1225</b>	<b>0.1366</b>		<b>300.7685</b>	<b>300.7685</b>	<b>0.0973</b>		<b>303.2004</b>



## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.3 Site Preparation - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0192	0.0121	0.1637	5.5000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		54.5022	54.5022	1.2400e-003		54.5332
<b>Total</b>	<b>0.0192</b>	<b>0.0121</b>	<b>0.1637</b>	<b>5.5000e-004</b>	<b>0.0559</b>	<b>3.7000e-004</b>	<b>0.0563</b>	<b>0.0148</b>	<b>3.4000e-004</b>	<b>0.0152</b>		<b>54.5022</b>	<b>54.5022</b>	<b>1.2400e-003</b>		<b>54.5332</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0510	0.0000	0.0510	5.5100e-003	0.0000	5.5100e-003			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
<b>Total</b>	<b>0.2095</b>	<b>2.1052</b>	<b>2.2797</b>	<b>3.1100e-003</b>	<b>0.0510</b>	<b>0.1331</b>	<b>0.1841</b>	<b>5.5100e-003</b>	<b>0.1225</b>	<b>0.1280</b>	<b>0.0000</b>	<b>300.7685</b>	<b>300.7685</b>	<b>0.0973</b>		<b>303.2004</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.3 Site Preparation - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0192	0.0121	0.1637	5.5000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		54.5022	54.5022	1.2400e-003		54.5332
<b>Total</b>	<b>0.0192</b>	<b>0.0121</b>	<b>0.1637</b>	<b>5.5000e-004</b>	<b>0.0559</b>	<b>3.7000e-004</b>	<b>0.0563</b>	<b>0.0148</b>	<b>3.4000e-004</b>	<b>0.0152</b>		<b>54.5022</b>	<b>54.5022</b>	<b>1.2400e-003</b>		<b>54.5332</b>

**3.4 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.7528</b>	<b>0.4672</b>	<b>1.2200</b>	<b>0.4138</b>	<b>0.4457</b>	<b>0.8595</b>		<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.4 Grading - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
<b>Total</b>	<b>0.0384</b>	<b>0.0242</b>	<b>0.3273</b>	<b>1.0900e-003</b>	<b>0.1118</b>	<b>7.4000e-004</b>	<b>0.1125</b>	<b>0.0296</b>	<b>6.8000e-004</b>	<b>0.0303</b>		<b>109.0044</b>	<b>109.0044</b>	<b>2.4800e-003</b>		<b>109.0665</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.2936</b>	<b>0.4672</b>	<b>0.7608</b>	<b>0.1614</b>	<b>0.4457</b>	<b>0.6070</b>	<b>0.0000</b>	<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.4 Grading - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
<b>Total</b>	<b>0.0384</b>	<b>0.0242</b>	<b>0.3273</b>	<b>1.0900e-003</b>	<b>0.1118</b>	<b>7.4000e-004</b>	<b>0.1125</b>	<b>0.0296</b>	<b>6.8000e-004</b>	<b>0.0303</b>		<b>109.0044</b>	<b>109.0044</b>	<b>2.4800e-003</b>		<b>109.0665</b>

**3.5 Building Construction - 2020****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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.978 1	1,102.978 1	0.3567		1,111.8962
<b>Total</b>	<b>0.8617</b>	<b>8.8523</b>	<b>7.3875</b>	<b>0.0114</b>		<b>0.5224</b>	<b>0.5224</b>		<b>0.4806</b>	<b>0.4806</b>		<b>1,102.978 1</b>	<b>1,102.978 1</b>	<b>0.3567</b>		<b>1,111.896 2</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0160	0.5209	0.1375	1.2500e-003	0.0320	2.7200e-003	0.0347	9.1900e-003	2.6000e-003	0.0118		135.5645	135.5645	0.0110		135.8386
Worker	0.0615	0.0387	0.5237	1.7500e-003	0.1788	1.1800e-003	0.1800	0.0474	1.0900e-003	0.0485		174.4070	174.4070	3.9800e-003		174.5064
<b>Total</b>	<b>0.0775</b>	<b>0.5596</b>	<b>0.6612</b>	<b>3.0000e-003</b>	<b>0.2108</b>	<b>3.9000e-003</b>	<b>0.2147</b>	<b>0.0566</b>	<b>3.6900e-003</b>	<b>0.0603</b>		<b>309.9715</b>	<b>309.9715</b>	<b>0.0149</b>		<b>310.3449</b>

**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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.978 1	1,102.978 1	0.3567		1,111.8962
<b>Total</b>	<b>0.8617</b>	<b>8.8523</b>	<b>7.3875</b>	<b>0.0114</b>		<b>0.5224</b>	<b>0.5224</b>		<b>0.4806</b>	<b>0.4806</b>	<b>0.0000</b>	<b>1,102.978 1</b>	<b>1,102.978 1</b>	<b>0.3567</b>		<b>1,111.896 2</b>



## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.5 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0160	0.5209	0.1375	1.2500e-003	0.0320	2.7200e-003	0.0347	9.1900e-003	2.6000e-003	0.0118		135.5645	135.5645	0.0110		135.8386
Worker	0.0615	0.0387	0.5237	1.7500e-003	0.1788	1.1800e-003	0.1800	0.0474	1.0900e-003	0.0485		174.4070	174.4070	3.9800e-003		174.5064
<b>Total</b>	<b>0.0775</b>	<b>0.5596</b>	<b>0.6612</b>	<b>3.0000e-003</b>	<b>0.2108</b>	<b>3.9000e-003</b>	<b>0.2147</b>	<b>0.0566</b>	<b>3.6900e-003</b>	<b>0.0603</b>		<b>309.9715</b>	<b>309.9715</b>	<b>0.0149</b>		<b>310.3449</b>

**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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
<b>Total</b>	<b>0.7750</b>	<b>7.9850</b>	<b>7.2637</b>	<b>0.0114</b>		<b>0.4475</b>	<b>0.4475</b>		<b>0.4117</b>	<b>0.4117</b>		<b>1,103.2158</b>	<b>1,103.2158</b>	<b>0.3568</b>		<b>1,112.1358</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.5 Building Construction - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0133	0.4691	0.1272	1.2300e-003	0.0320	9.7000e-004	0.0329	9.1900e-003	9.3000e-004	0.0101		134.3963	134.3963	0.0105		134.6597
Worker	0.0578	0.0349	0.4860	1.6900e-003	0.1788	1.1600e-003	0.1800	0.0474	1.0700e-003	0.0485		168.3511	168.3511	3.6100e-003		168.4412
<b>Total</b>	<b>0.0711</b>	<b>0.5040</b>	<b>0.6132</b>	<b>2.9200e-003</b>	<b>0.2108</b>	<b>2.1300e-003</b>	<b>0.2129</b>	<b>0.0566</b>	<b>2.0000e-003</b>	<b>0.0586</b>		<b>302.7473</b>	<b>302.7473</b>	<b>0.0142</b>		<b>303.1009</b>

**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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
<b>Total</b>	<b>0.7750</b>	<b>7.9850</b>	<b>7.2637</b>	<b>0.0114</b>		<b>0.4475</b>	<b>0.4475</b>		<b>0.4117</b>	<b>0.4117</b>	<b>0.0000</b>	<b>1,103.2158</b>	<b>1,103.2158</b>	<b>0.3568</b>		<b>1,112.1358</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.5 Building Construction - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0133	0.4691	0.1272	1.2300e-003	0.0320	9.7000e-004	0.0329	9.1900e-003	9.3000e-004	0.0101		134.3963	134.3963	0.0105		134.6597
Worker	0.0578	0.0349	0.4860	1.6900e-003	0.1788	1.1600e-003	0.1800	0.0474	1.0700e-003	0.0485		168.3511	168.3511	3.6100e-003		168.4412
<b>Total</b>	<b>0.0711</b>	<b>0.5040</b>	<b>0.6132</b>	<b>2.9200e-003</b>	<b>0.2108</b>	<b>2.1300e-003</b>	<b>0.2129</b>	<b>0.0566</b>	<b>2.0000e-003</b>	<b>0.0586</b>		<b>302.7473</b>	<b>302.7473</b>	<b>0.0142</b>		<b>303.1009</b>

**3.6 Paving - 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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.7495</b>	<b>6.7178</b>	<b>7.0899</b>	<b>0.0113</b>		<b>0.3534</b>	<b>0.3534</b>		<b>0.3286</b>	<b>0.3286</b>		<b>1,035.3425</b>	<b>1,035.3425</b>	<b>0.3016</b>		<b>1,042.8818</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.6 Paving - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0393	0.5467	1.9000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		189.3950	189.3950	4.0600e-003		189.4963
<b>Total</b>	<b>0.0650</b>	<b>0.0393</b>	<b>0.5467</b>	<b>1.9000e-003</b>	<b>0.2012</b>	<b>1.3000e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.2000e-003</b>	<b>0.0546</b>		<b>189.3950</b>	<b>189.3950</b>	<b>4.0600e-003</b>		<b>189.4963</b>

**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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.7495</b>	<b>6.7178</b>	<b>7.0899</b>	<b>0.0113</b>		<b>0.3534</b>	<b>0.3534</b>		<b>0.3286</b>	<b>0.3286</b>	<b>0.0000</b>	<b>1,035.3425</b>	<b>1,035.3425</b>	<b>0.3016</b>		<b>1,042.8818</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.6 Paving - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0393	0.5467	1.9000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		189.3950	189.3950	4.0600e-003		189.4963
<b>Total</b>	<b>0.0650</b>	<b>0.0393</b>	<b>0.5467</b>	<b>1.9000e-003</b>	<b>0.2012</b>	<b>1.3000e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.2000e-003</b>	<b>0.0546</b>		<b>189.3950</b>	<b>189.3950</b>	<b>4.0600e-003</b>		<b>189.4963</b>

**3.7 Architectural Coating - 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					
Archit. Coating	8.5802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>8.7991</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.7 Architectural Coating - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0108	6.5500e-003	0.0911	3.2000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.5658	31.5658	6.8000e-004		31.5827
<b>Total</b>	<b>0.0108</b>	<b>6.5500e-003</b>	<b>0.0911</b>	<b>3.2000e-004</b>	<b>0.0335</b>	<b>2.2000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.0000e-004</b>	<b>9.0900e-003</b>		<b>31.5658</b>	<b>31.5658</b>	<b>6.8000e-004</b>		<b>31.5827</b>

**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	8.5802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>8.7991</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**3.7 Architectural Coating - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0108	6.5500e-003	0.0911	3.2000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		31.5658	31.5658	6.8000e-004		31.5827
<b>Total</b>	<b>0.0108</b>	<b>6.5500e-003</b>	<b>0.0911</b>	<b>3.2000e-004</b>	<b>0.0335</b>	<b>2.2000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.0000e-004</b>	<b>9.0900e-003</b>		<b>31.5658</b>	<b>31.5658</b>	<b>6.8000e-004</b>		<b>31.5827</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0745	0.2781	0.8484	3.1400e-003	0.2815	2.3000e-003	0.2838	0.0753	2.1300e-003	0.0774		319.4635	319.4635	0.0132		319.7943
Unmitigated	0.0866	0.3479	1.1870	4.6500e-003	0.4245	3.3000e-003	0.4278	0.1135	3.0700e-003	0.1166		472.2620	472.2620	0.0187		472.7295

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	58.56	58.56	58.56	200,108	132,697
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	58.56	58.56	58.56	200,108	132,697

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix



## 19237 301 &amp; 305 Mountain View - Orange County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Non-Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

## 5.0 Energy Detail

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Historical Energy Use: N

## 5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive 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	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
NaturalGas Unmitigated	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	279.662	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.0200e-003</b>	<b>0.0258</b>	<b>0.0110</b>	<b>1.6000e-004</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>32.9014</b>	<b>32.9014</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0970</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.279662	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.0200e-003</b>	<b>0.0258</b>	<b>0.0110</b>	<b>1.6000e-004</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>32.9014</b>	<b>32.9014</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0970</b>

**6.0 Area Detail**

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Unmitigated	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**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	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0140	0.1194	0.0508	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	152.4706	152.4706	2.9200e-003	2.8000e-003	153.3766
Landscaping	0.0200	7.6200e-003	0.6608	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1885	1.1885	1.1500e-003		1.2172
<b>Total</b>	<b>0.4346</b>	<b>0.1271</b>	<b>0.7116</b>	<b>7.9000e-004</b>		<b>0.0133</b>	<b>0.0133</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>153.6591</b>	<b>153.6591</b>	<b>4.0700e-003</b>	<b>2.8000e-003</b>	<b>154.5939</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Summer

**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	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0140	0.1194	0.0508	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	152.4706	152.4706	2.9200e-003	2.8000e-003	153.3766
Landscaping	0.0200	7.6200e-003	0.6608	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1885	1.1885	1.1500e-003		1.2172
<b>Total</b>	<b>0.4346</b>	<b>0.1271</b>	<b>0.7116</b>	<b>7.9000e-004</b>		<b>0.0133</b>	<b>0.0133</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>153.6591</b>	<b>153.6591</b>	<b>4.0700e-003</b>	<b>2.8000e-003</b>	<b>154.5939</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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19237 301 &amp; 305 Mountain View - Orange County, Summer

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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19237 301 &amp; 305 Mountain View - Orange County, Winter

**19237 301 & 305 Mountain View**  
**Orange County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	8.00	Dwelling Unit	0.20	18,152.00	23
Other Asphalt Surfaces	0.15	Acre	0.15	6,534.00	0
Other Non-Asphalt Surfaces	0.39	Acre	0.39	16,988.40	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			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

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

## Project Characteristics -

Land Use - 32,452 sf (~0.74 ac) site w/ 8 condo DUs (total building square footage = 18,152 sf & building footprint = 8,744 sf), ~20% of site (~0.15 ac) paving on-site driveways/roadways, & remainder landscaping/hardscape (~0.39 ac).

Construction Phase - Anticipated start date of September 2020 with completion by the end of December 2021.

Off-road Equipment - Site preparation of only up to ~50% of the site to remove existing hardscape, trees, and landscaping associated with existing residential uses; therefore, only ~50% of CalEEMod default equipment for site preparation needed.

Grading - Site anticipated to balance. Site prep of only ~50% of site (~0.37 ac) to remove existing hardscape/trees/landscaping associated with existing residential uses.

Demolition - Existing residential buildings of ~3,165 square feet to be demolished.

Vehicle Trips - Per Trip Generation Analysis, 7.32 trips per DU per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Up to ~15-20 trees to be planted; therefore, to be conservative, used lower estimate of ~15.

## Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~10.81 DU/Acre. Site is ~0.13 miles NE of OCTA Rte 64 Stop 1st-Newhope & ~3.4 miles NW of downtown Santa Ana.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	283.00
tblConstructionPhase	NumDays	10.00	28.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	1.00	3.00
tblConstructionPhase	PhaseEndDate	2/18/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	2/4/2021	11/23/2021
tblConstructionPhase	PhaseEndDate	9/14/2020	10/8/2020
tblConstructionPhase	PhaseEndDate	9/17/2020	10/22/2020
tblConstructionPhase	PhaseEndDate	2/11/2021	12/13/2021



## 19237 301 &amp; 305 Mountain View - Orange County, Winter

tblConstructionPhase	PhaseEndDate	9/15/2020	10/13/2020
tblConstructionPhase	PhaseStartDate	2/12/2021	12/14/2021
tblConstructionPhase	PhaseStartDate	9/18/2020	10/23/2020
tblConstructionPhase	PhaseStartDate	9/16/2020	10/14/2020
tblConstructionPhase	PhaseStartDate	2/5/2021	11/24/2021
tblConstructionPhase	PhaseStartDate	9/15/2020	10/9/2020
tblFireplaces	NumberGas	6.80	7.20
tblFireplaces	NumberWood	0.40	0.00
tblGrading	AcresOfGrading	0.00	0.37
tblLandUse	LandUseSquareFeet	8,000.00	18,152.00
tblLandUse	LotAcreage	0.50	0.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblSequestration	NumberOfNewTrees	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	0.40	0.00
tblWoodstoves	NumberNoncatalytic	0.40	0.00

## 2.0 Emissions Summary

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## 19237 301 &amp; 305 Mountain View - Orange County, Winter

**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					
2020	0.9479	9.4156	8.0222	0.0143	0.8645	0.5263	1.3325	0.4434	0.4843	0.8898	0.0000	1,400.270 5	1,400.270 5	0.3720	0.0000	1,409.570 7
2021	8.8114	8.4913	7.8517	0.0142	0.2108	0.4497	0.6605	0.0566	0.4138	0.4704	0.0000	1,393.643 4	1,393.643 4	0.3713	0.0000	1,402.925 1
Maximum	8.8114	9.4156	8.0222	0.0143	0.8645	0.5263	1.3325	0.4434	0.4843	0.8898	0.0000	1,400.270 5	1,400.270 5	0.3720	0.0000	1,409.570 7

**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					
2020	0.9479	9.4156	8.0222	0.0143	0.4054	0.5263	0.8733	0.1910	0.4843	0.6374	0.0000	1,400.270 5	1,400.270 5	0.3720	0.0000	1,409.570 7
2021	8.8114	8.4913	7.8517	0.0142	0.2108	0.4497	0.6605	0.0566	0.4138	0.4704	0.0000	1,393.643 4	1,393.643 4	0.3713	0.0000	1,402.925 1
Maximum	8.8114	9.4156	8.0222	0.0143	0.4054	0.5263	0.8733	0.1910	0.4843	0.6374	0.0000	1,400.270 5	1,400.270 5	0.3720	0.0000	1,409.570 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	42.70	0.00	23.04	50.48	0.00	18.56	0.00	0.00	0.00	0.00	0.00	0.00

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

**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	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Energy	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Mobile	0.0851	0.3578	1.1319	4.4400e-003	0.4245	3.3200e-003	0.4278	0.1135	3.0800e-003	0.1166		451.4417	451.4417	0.0186		451.9073
<b>Total</b>	<b>0.5227</b>	<b>0.5107</b>	<b>1.8545</b>	<b>5.4000e-003</b>	<b>0.4245</b>	<b>0.0187</b>	<b>0.4432</b>	<b>0.1135</b>	<b>0.0185</b>	<b>0.1320</b>	<b>0.0000</b>	<b>638.0023</b>	<b>638.0023</b>	<b>0.0233</b>	<b>3.4000e-003</b>	<b>639.5981</b>

**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	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Energy	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Mobile	0.0733	0.2840	0.8228	3.0000e-003	0.2815	2.3100e-003	0.2838	0.0753	2.1500e-003	0.0774		305.2021	305.2021	0.0133		305.5343
<b>Total</b>	<b>0.5109</b>	<b>0.4368</b>	<b>1.5453</b>	<b>3.9600e-003</b>	<b>0.2815</b>	<b>0.0177</b>	<b>0.2992</b>	<b>0.0753</b>	<b>0.0175</b>	<b>0.0928</b>	<b>0.0000</b>	<b>491.7627</b>	<b>491.7627</b>	<b>0.0180</b>	<b>3.4000e-003</b>	<b>493.2251</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.27	14.46	16.67	26.67	33.69	5.40	32.49	33.69	5.04	29.68	0.00	22.92	22.92	22.86	0.00	22.89

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	10/8/2020	5	28	
2	Site Preparation	Site Preparation	10/9/2020	10/13/2020	5	3	
3	Grading	Grading	10/14/2020	10/22/2020	5	7	
4	Building Construction	Building Construction	10/23/2020	11/23/2021	5	283	
5	Paving	Paving	11/24/2021	12/13/2021	5	14	
6	Architectural Coating	Architectural Coating	12/14/2021	12/31/2021	5	14	

Acres of Grading (Site Preparation Phase): 0.37

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.54

Residential Indoor: 36,758; Residential Outdoor: 12,253; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,411 (Architectural Coating – sqft)

#### OffRoad Equipment

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	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	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1113	0.0000	0.1113	0.0169	0.0000	0.0169			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.235 2	1,147.235 2	0.2169		1,152.657 8
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.1113</b>	<b>0.4672</b>	<b>0.5785</b>	<b>0.0169</b>	<b>0.4457</b>	<b>0.4625</b>		<b>1,147.235 2</b>	<b>1,147.235 2</b>	<b>0.2169</b>		<b>1,152.657 8</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.2 Demolition - 2020****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	3.8700e-003	0.1392	0.0366	3.8000e-004	8.7100e-003	4.5000e-004	9.1600e-003	2.3800e-003	4.3000e-004	2.8200e-003		42.0090	42.0090	4.5300e-003		42.1222
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
<b>Total</b>	<b>0.0473</b>	<b>0.1658</b>	<b>0.3391</b>	<b>1.4100e-003</b>	<b>0.1205</b>	<b>1.1900e-003</b>	<b>0.1217</b>	<b>0.0320</b>	<b>1.1100e-003</b>	<b>0.0331</b>		<b>145.1711</b>	<b>145.1711</b>	<b>6.8800e-003</b>		<b>145.3431</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0434	0.0000	0.0434	6.5700e-003	0.0000	6.5700e-003			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.0434</b>	<b>0.4672</b>	<b>0.5106</b>	<b>6.5700e-003</b>	<b>0.4457</b>	<b>0.4522</b>	<b>0.0000</b>	<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.2 Demolition - 2020****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	3.8700e-003	0.1392	0.0366	3.8000e-004	8.7100e-003	4.5000e-004	9.1600e-003	2.3800e-003	4.3000e-004	2.8200e-003		42.0090	42.0090	4.5300e-003		42.1222
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
<b>Total</b>	<b>0.0473</b>	<b>0.1658</b>	<b>0.3391</b>	<b>1.4100e-003</b>	<b>0.1205</b>	<b>1.1900e-003</b>	<b>0.1217</b>	<b>0.0320</b>	<b>1.1100e-003</b>	<b>0.0331</b>		<b>145.1711</b>	<b>145.1711</b>	<b>6.8800e-003</b>		<b>145.3431</b>

**3.3 Site Preparation - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1308	0.0000	0.1308	0.0141	0.0000	0.0141			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
<b>Total</b>	<b>0.2095</b>	<b>2.1052</b>	<b>2.2797</b>	<b>3.1100e-003</b>	<b>0.1308</b>	<b>0.1331</b>	<b>0.2639</b>	<b>0.0141</b>	<b>0.1225</b>	<b>0.1366</b>		<b>300.7685</b>	<b>300.7685</b>	<b>0.0973</b>		<b>303.2004</b>



19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.3 Site Preparation - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0133	0.1513	5.2000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		51.5811	51.5811	1.1800e-003		51.6105
<b>Total</b>	<b>0.0217</b>	<b>0.0133</b>	<b>0.1513</b>	<b>5.2000e-004</b>	<b>0.0559</b>	<b>3.7000e-004</b>	<b>0.0563</b>	<b>0.0148</b>	<b>3.4000e-004</b>	<b>0.0152</b>		<b>51.5811</b>	<b>51.5811</b>	<b>1.1800e-003</b>		<b>51.6105</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0510	0.0000	0.0510	5.5100e-003	0.0000	5.5100e-003			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
<b>Total</b>	<b>0.2095</b>	<b>2.1052</b>	<b>2.2797</b>	<b>3.1100e-003</b>	<b>0.0510</b>	<b>0.1331</b>	<b>0.1841</b>	<b>5.5100e-003</b>	<b>0.1225</b>	<b>0.1280</b>	<b>0.0000</b>	<b>300.7685</b>	<b>300.7685</b>	<b>0.0973</b>		<b>303.2004</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.3 Site Preparation - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0133	0.1513	5.2000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		51.5811	51.5811	1.1800e-003		51.6105
<b>Total</b>	<b>0.0217</b>	<b>0.0133</b>	<b>0.1513</b>	<b>5.2000e-004</b>	<b>0.0559</b>	<b>3.7000e-004</b>	<b>0.0563</b>	<b>0.0148</b>	<b>3.4000e-004</b>	<b>0.0152</b>		<b>51.5811</b>	<b>51.5811</b>	<b>1.1800e-003</b>		<b>51.6105</b>

**3.4 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.7528</b>	<b>0.4672</b>	<b>1.2200</b>	<b>0.4138</b>	<b>0.4457</b>	<b>0.8595</b>		<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.4 Grading - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
<b>Total</b>	<b>0.0434</b>	<b>0.0266</b>	<b>0.3025</b>	<b>1.0300e-003</b>	<b>0.1118</b>	<b>7.4000e-004</b>	<b>0.1125</b>	<b>0.0296</b>	<b>6.8000e-004</b>	<b>0.0303</b>		<b>103.1621</b>	<b>103.1621</b>	<b>2.3500e-003</b>		<b>103.2210</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
<b>Total</b>	<b>0.8674</b>	<b>7.8729</b>	<b>7.6226</b>	<b>0.0120</b>	<b>0.2936</b>	<b>0.4672</b>	<b>0.7608</b>	<b>0.1614</b>	<b>0.4457</b>	<b>0.6070</b>	<b>0.0000</b>	<b>1,147.2352</b>	<b>1,147.2352</b>	<b>0.2169</b>		<b>1,152.6578</b>

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**3.4 Grading - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
<b>Total</b>	<b>0.0434</b>	<b>0.0266</b>	<b>0.3025</b>	<b>1.0300e-003</b>	<b>0.1118</b>	<b>7.4000e-004</b>	<b>0.1125</b>	<b>0.0296</b>	<b>6.8000e-004</b>	<b>0.0303</b>		<b>103.1621</b>	<b>103.1621</b>	<b>2.3500e-003</b>		<b>103.2210</b>

**3.5 Building Construction - 2020****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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.978 1	1,102.978 1	0.3567		1,111.8962
<b>Total</b>	<b>0.8617</b>	<b>8.8523</b>	<b>7.3875</b>	<b>0.0114</b>		<b>0.5224</b>	<b>0.5224</b>		<b>0.4806</b>	<b>0.4806</b>		<b>1,102.978 1</b>	<b>1,102.978 1</b>	<b>0.3567</b>		<b>1,111.896 2</b>

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**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0167	0.5207	0.1507	1.2200e-003	0.0320	2.7600e-003	0.0347	9.1900e-003	2.6400e-003	0.0118		132.2330	132.2330	0.0115		132.5210
Worker	0.0695	0.0426	0.4841	1.6600e-003	0.1788	1.1800e-003	0.1800	0.0474	1.0900e-003	0.0485		165.0594	165.0594	3.7700e-003		165.1535
<b>Total</b>	<b>0.0862</b>	<b>0.5633</b>	<b>0.6348</b>	<b>2.8800e-003</b>	<b>0.2108</b>	<b>3.9400e-003</b>	<b>0.2147</b>	<b>0.0566</b>	<b>3.7300e-003</b>	<b>0.0604</b>		<b>297.2924</b>	<b>297.2924</b>	<b>0.0153</b>		<b>297.6745</b>

**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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.978 1	1,102.978 1	0.3567		1,111.8962
<b>Total</b>	<b>0.8617</b>	<b>8.8523</b>	<b>7.3875</b>	<b>0.0114</b>		<b>0.5224</b>	<b>0.5224</b>		<b>0.4806</b>	<b>0.4806</b>	<b>0.0000</b>	<b>1,102.978 1</b>	<b>1,102.978 1</b>	<b>0.3567</b>		<b>1,111.896 2</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.5 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0167	0.5207	0.1507	1.2200e-003	0.0320	2.7600e-003	0.0347	9.1900e-003	2.6400e-003	0.0118		132.2330	132.2330	0.0115		132.5210
Worker	0.0695	0.0426	0.4841	1.6600e-003	0.1788	1.1800e-003	0.1800	0.0474	1.0900e-003	0.0485		165.0594	165.0594	3.7700e-003		165.1535
<b>Total</b>	<b>0.0862</b>	<b>0.5633</b>	<b>0.6348</b>	<b>2.8800e-003</b>	<b>0.2108</b>	<b>3.9400e-003</b>	<b>0.2147</b>	<b>0.0566</b>	<b>3.7300e-003</b>	<b>0.0604</b>		<b>297.2924</b>	<b>297.2924</b>	<b>0.0153</b>		<b>297.6745</b>

**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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
<b>Total</b>	<b>0.7750</b>	<b>7.9850</b>	<b>7.2637</b>	<b>0.0114</b>		<b>0.4475</b>	<b>0.4475</b>		<b>0.4117</b>	<b>0.4117</b>		<b>1,103.2158</b>	<b>1,103.2158</b>	<b>0.3568</b>		<b>1,112.1358</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.5 Building Construction - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0140	0.4680	0.1396	1.2000e-003	0.0320	1.0100e-003	0.0330	9.1900e-003	9.7000e-004	0.0102		131.0945	131.0945	0.0111		131.3708
Worker	0.0654	0.0384	0.4484	1.6000e-003	0.1788	1.1600e-003	0.1800	0.0474	1.0700e-003	0.0485		159.3332	159.3332	3.4100e-003		159.4185
<b>Total</b>	<b>0.0794</b>	<b>0.5064</b>	<b>0.5880</b>	<b>2.8000e-003</b>	<b>0.2108</b>	<b>2.1700e-003</b>	<b>0.2130</b>	<b>0.0566</b>	<b>2.0400e-003</b>	<b>0.0587</b>		<b>290.4277</b>	<b>290.4277</b>	<b>0.0145</b>		<b>290.7893</b>

**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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
<b>Total</b>	<b>0.7750</b>	<b>7.9850</b>	<b>7.2637</b>	<b>0.0114</b>		<b>0.4475</b>	<b>0.4475</b>		<b>0.4117</b>	<b>0.4117</b>	<b>0.0000</b>	<b>1,103.2158</b>	<b>1,103.2158</b>	<b>0.3568</b>		<b>1,112.1358</b>

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**3.5 Building Construction - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0140	0.4680	0.1396	1.2000e-003	0.0320	1.0100e-003	0.0330	9.1900e-003	9.7000e-004	0.0102		131.0945	131.0945	0.0111		131.3708
Worker	0.0654	0.0384	0.4484	1.6000e-003	0.1788	1.1600e-003	0.1800	0.0474	1.0700e-003	0.0485		159.3332	159.3332	3.4100e-003		159.4185
<b>Total</b>	<b>0.0794</b>	<b>0.5064</b>	<b>0.5880</b>	<b>2.8000e-003</b>	<b>0.2108</b>	<b>2.1700e-003</b>	<b>0.2130</b>	<b>0.0566</b>	<b>2.0400e-003</b>	<b>0.0587</b>		<b>290.4277</b>	<b>290.4277</b>	<b>0.0145</b>		<b>290.7893</b>

**3.6 Paving - 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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.7495</b>	<b>6.7178</b>	<b>7.0899</b>	<b>0.0113</b>		<b>0.3534</b>	<b>0.3534</b>		<b>0.3286</b>	<b>0.3286</b>		<b>1,035.3425</b>	<b>1,035.3425</b>	<b>0.3016</b>		<b>1,042.8818</b>



19237 301 &amp; 305 Mountain View - Orange County, Winter

**3.6 Paving - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0736	0.0432	0.5045	1.8000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		179.2498	179.2498	3.8400e-003		179.3458
<b>Total</b>	<b>0.0736</b>	<b>0.0432</b>	<b>0.5045</b>	<b>1.8000e-003</b>	<b>0.2012</b>	<b>1.3000e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.2000e-003</b>	<b>0.0546</b>		<b>179.2498</b>	<b>179.2498</b>	<b>3.8400e-003</b>		<b>179.3458</b>

**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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.7495</b>	<b>6.7178</b>	<b>7.0899</b>	<b>0.0113</b>		<b>0.3534</b>	<b>0.3534</b>		<b>0.3286</b>	<b>0.3286</b>	<b>0.0000</b>	<b>1,035.3425</b>	<b>1,035.3425</b>	<b>0.3016</b>		<b>1,042.8818</b>

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**3.6 Paving - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0736	0.0432	0.5045	1.8000e-003	0.2012	1.3000e-003	0.2025	0.0534	1.2000e-003	0.0546		179.2498	179.2498	3.8400e-003		179.3458
<b>Total</b>	<b>0.0736</b>	<b>0.0432</b>	<b>0.5045</b>	<b>1.8000e-003</b>	<b>0.2012</b>	<b>1.3000e-003</b>	<b>0.2025</b>	<b>0.0534</b>	<b>1.2000e-003</b>	<b>0.0546</b>		<b>179.2498</b>	<b>179.2498</b>	<b>3.8400e-003</b>		<b>179.3458</b>

**3.7 Architectural Coating - 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					
Archit. Coating	8.5802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>8.7991</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

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**3.7 Architectural Coating - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0123	7.2000e-003	0.0841	3.0000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.8750	29.8750	6.4000e-004		29.8910
<b>Total</b>	<b>0.0123</b>	<b>7.2000e-003</b>	<b>0.0841</b>	<b>3.0000e-004</b>	<b>0.0335</b>	<b>2.2000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.0000e-004</b>	<b>9.0900e-003</b>		<b>29.8750</b>	<b>29.8750</b>	<b>6.4000e-004</b>		<b>29.8910</b>

**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	8.5802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>8.7991</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

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**3.7 Architectural Coating - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0123	7.2000e-003	0.0841	3.0000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		29.8750	29.8750	6.4000e-004		29.8910
<b>Total</b>	<b>0.0123</b>	<b>7.2000e-003</b>	<b>0.0841</b>	<b>3.0000e-004</b>	<b>0.0335</b>	<b>2.2000e-004</b>	<b>0.0338</b>	<b>8.8900e-003</b>	<b>2.0000e-004</b>	<b>9.0900e-003</b>		<b>29.8750</b>	<b>29.8750</b>	<b>6.4000e-004</b>		<b>29.8910</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0733	0.2840	0.8228	3.0000e-003	0.2815	2.3100e-003	0.2838	0.0753	2.1500e-003	0.0774		305.2021	305.2021	0.0133		305.5343
Unmitigated	0.0851	0.3578	1.1319	4.4400e-003	0.4245	3.3200e-003	0.4278	0.1135	3.0800e-003	0.1166		451.4417	451.4417	0.0186		451.9073

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	58.56	58.56	58.56	200,108	132,697
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	58.56	58.56	58.56	200,108	132,697

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

## 19237 301 &amp; 305 Mountain View - Orange County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Non-Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

## 5.0 Energy Detail

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Historical Energy Use: N

## 5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive 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	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
NaturalGas Unmitigated	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970

19237 301 &amp; 305 Mountain View - Orange County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	279.662	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.0200e-003</b>	<b>0.0258</b>	<b>0.0110</b>	<b>1.6000e-004</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>32.9014</b>	<b>32.9014</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0970</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	0.279662	3.0200e-003	0.0258	0.0110	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.9014	32.9014	6.3000e-004	6.0000e-004	33.0970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.0200e-003</b>	<b>0.0258</b>	<b>0.0110</b>	<b>1.6000e-004</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>2.0800e-003</b>	<b>2.0800e-003</b>		<b>32.9014</b>	<b>32.9014</b>	<b>6.3000e-004</b>	<b>6.0000e-004</b>	<b>33.0970</b>

**6.0 Area Detail**

19237 301 &amp; 305 Mountain View - Orange County, Winter

## 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939
Unmitigated	0.4346	0.1271	0.7116	8.0000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	153.6591	153.6591	4.0700e-003	2.8000e-003	154.5939



19237 301 &amp; 305 Mountain View - Orange County, Winter

**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	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0140	0.1194	0.0508	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	152.4706	152.4706	2.9200e-003	2.8000e-003	153.3766
Landscaping	0.0200	7.6200e-003	0.6608	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1885	1.1885	1.1500e-003		1.2172
<b>Total</b>	<b>0.4346</b>	<b>0.1271</b>	<b>0.7116</b>	<b>7.9000e-004</b>		<b>0.0133</b>	<b>0.0133</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>153.6591</b>	<b>153.6591</b>	<b>4.0700e-003</b>	<b>2.8000e-003</b>	<b>154.5939</b>

19237 301 &amp; 305 Mountain View - Orange County, Winter

**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	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0140	0.1194	0.0508	7.6000e-004		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	152.4706	152.4706	2.9200e-003	2.8000e-003	153.3766
Landscaping	0.0200	7.6200e-003	0.6608	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1885	1.1885	1.1500e-003		1.2172
<b>Total</b>	<b>0.4346</b>	<b>0.1271</b>	<b>0.7116</b>	<b>7.9000e-004</b>		<b>0.0133</b>	<b>0.0133</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>153.6591</b>	<b>153.6591</b>	<b>4.0700e-003</b>	<b>2.8000e-003</b>	<b>154.5939</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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19237 301 &amp; 305 Mountain View - Orange County, Winter

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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19237 301 &amp; 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY - Orange County, Summer

## 19237 301 & 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY

### Orange County, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	2.00	Dwelling Unit	0.74	3,165.00	6

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	30
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing Use OPERATIONAL ANALYSIS ONLY

Land Use - 32,452 sf (~0.74 ac) site with 2 existing single-family detached residential dwelling units totaling ~3,165 sf.

Vehicle Trips - Per Trip Generation Analysis, 9.44 trips/DU/day.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,600.00	3,165.00
tblLandUse	LotAcreage	0.65	0.74
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Energy	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Mobile	0.0323	0.1326	0.4408	1.5900e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4600e-003	0.0381		161.6366	161.6366	6.7300e-003		161.8048
<b>Total</b>	<b>0.6310</b>	<b>0.1891</b>	<b>1.6289</b>	<b>4.2700e-003</b>	<b>0.1368</b>	<b>0.1563</b>	<b>0.2931</b>	<b>0.0366</b>	<b>0.1562</b>	<b>0.1928</b>	<b>18.7338</b>	<b>214.5686</b>	<b>233.3024</b>	<b>0.0632</b>	<b>1.5700e-003</b>	<b>235.3524</b>

#### 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	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Energy	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Mobile	0.0323	0.1326	0.4408	1.5900e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4600e-003	0.0381		161.6366	161.6366	6.7300e-003		161.8048
<b>Total</b>	<b>0.6310</b>	<b>0.1891</b>	<b>1.6289</b>	<b>4.2700e-003</b>	<b>0.1368</b>	<b>0.1563</b>	<b>0.2931</b>	<b>0.0366</b>	<b>0.1562</b>	<b>0.1928</b>	<b>18.7338</b>	<b>214.5686</b>	<b>233.3024</b>	<b>0.0632</b>	<b>1.5700e-003</b>	<b>235.3524</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0323	0.1326	0.4408	1.5900e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4600e-003	0.0381		161.6366	161.6366	6.7300e-003		161.8048
Unmitigated	0.0323	0.1326	0.4408	1.5900e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4600e-003	0.0381		161.6366	161.6366	6.7300e-003		161.8048

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	18.88	18.88	18.88	64,516	64,516
Total	18.88	18.88	18.88	64,516	64,516

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

## 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	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
NaturalGas Unmitigated	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

### 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					
Single Family Housing	141.397	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Total		1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

#### 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					
Single Family Housing	0.141397	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Total		1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Unmitigated	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138

### 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	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0627					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5241	0.0415	1.0171	2.5900e-003		0.1528	0.1528		0.1528	0.1528	18.7338	36.0000	54.7338	0.0559	1.2700e-003	56.5095
Landscaping	5.0400e-003	1.9100e-003	0.1656	1.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.2971	0.2971	2.9000e-004		0.3044
<b>Total</b>	<b>0.5972</b>	<b>0.0434</b>	<b>1.1827</b>	<b>2.6000e-003</b>		<b>0.1537</b>	<b>0.1537</b>		<b>0.1537</b>	<b>0.1537</b>	<b>18.7338</b>	<b>36.2971</b>	<b>55.0309</b>	<b>0.0562</b>	<b>1.2700e-003</b>	<b>56.8138</b>

#### 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	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0627					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5241	0.0415	1.0171	2.5900e-003		0.1528	0.1528		0.1528	0.1528	18.7338	36.0000	54.7338	0.0559	1.2700e-003	56.5095
Landscaping	5.0400e-003	1.9100e-003	0.1656	1.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.2971	0.2971	2.9000e-004		0.3044
<b>Total</b>	<b>0.5972</b>	<b>0.0434</b>	<b>1.1827</b>	<b>2.6000e-003</b>		<b>0.1537</b>	<b>0.1537</b>		<b>0.1537</b>	<b>0.1537</b>	<b>18.7338</b>	<b>36.2971</b>	<b>55.0309</b>	<b>0.0562</b>	<b>1.2700e-003</b>	<b>56.8138</b>



7.0 Water Detail

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7.1 Mitigation Measures Water

8.0 Waste Detail

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8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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19237 301 &amp; 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY - Orange County, Winter

**19237 301 & 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY**  
**Orange County, Winter**

**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	2.00	Dwelling Unit	0.74	3,165.00	6

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	30
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Existing Use OPERATIONAL ANALYSIS ONLY

Land Use - 32,452 sf (~0.74 ac) site with 2 existing single-family detached residential dwelling units totaling ~3,165 sf.

Vehicle Trips - Per Trip Generation Analysis, 9.44 trips/DU/day.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,600.00	3,165.00
tblLandUse	LotAcreage	0.65	0.74
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Energy	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Mobile	0.0318	0.1369	0.4213	1.5200e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4700e-003	0.0381		154.4158	154.4158	6.6900e-003		154.5832
<b>Total</b>	<b>0.6306</b>	<b>0.1933</b>	<b>1.6095</b>	<b>4.2000e-003</b>	<b>0.1368</b>	<b>0.1563</b>	<b>0.2931</b>	<b>0.0366</b>	<b>0.1562</b>	<b>0.1928</b>	<b>18.7338</b>	<b>207.3478</b>	<b>226.0817</b>	<b>0.0632</b>	<b>1.5700e-003</b>	<b>228.1308</b>

#### 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	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Energy	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Mobile	0.0318	0.1369	0.4213	1.5200e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4700e-003	0.0381		154.4158	154.4158	6.6900e-003		154.5832
<b>Total</b>	<b>0.6306</b>	<b>0.1933</b>	<b>1.6095</b>	<b>4.2000e-003</b>	<b>0.1368</b>	<b>0.1563</b>	<b>0.2931</b>	<b>0.0366</b>	<b>0.1562</b>	<b>0.1928</b>	<b>18.7338</b>	<b>207.3478</b>	<b>226.0817</b>	<b>0.0632</b>	<b>1.5700e-003</b>	<b>228.1308</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0318	0.1369	0.4213	1.5200e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4700e-003	0.0381		154.4158	154.4158	6.6900e-003		154.5832
Unmitigated	0.0318	0.1369	0.4213	1.5200e-003	0.1368	1.5600e-003	0.1384	0.0366	1.4700e-003	0.0381		154.4158	154.4158	6.6900e-003		154.5832

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	18.88	18.88	18.88	64,516	64,516
Total	18.88	18.88	18.88	64,516	64,516

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

## 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	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
NaturalGas Unmitigated	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

### 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					
Single Family Housing	141.397	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Total		1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

#### 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					
Single Family Housing	0.141397	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338
Total		1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.6349	16.6349	3.2000e-004	3.0000e-004	16.7338

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138
Unmitigated	0.5972	0.0434	1.1827	2.6000e-003		0.1537	0.1537		0.1537	0.1537	18.7338	36.2971	55.0309	0.0562	1.2700e-003	56.8138

### 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	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0627					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5241	0.0415	1.0171	2.5900e-003		0.1528	0.1528		0.1528	0.1528	18.7338	36.0000	54.7338	0.0559	1.2700e-003	56.5095
Landscaping	5.0400e-003	1.9100e-003	0.1656	1.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.2971	0.2971	2.9000e-004		0.3044
<b>Total</b>	<b>0.5972</b>	<b>0.0434</b>	<b>1.1827</b>	<b>2.6000e-003</b>		<b>0.1537</b>	<b>0.1537</b>		<b>0.1537</b>	<b>0.1537</b>	<b>18.7338</b>	<b>36.2971</b>	<b>55.0309</b>	<b>0.0562</b>	<b>1.2700e-003</b>	<b>56.8138</b>

#### 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	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0627					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5241	0.0415	1.0171	2.5900e-003		0.1528	0.1528		0.1528	0.1528	18.7338	36.0000	54.7338	0.0559	1.2700e-003	56.5095
Landscaping	5.0400e-003	1.9100e-003	0.1656	1.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.2971	0.2971	2.9000e-004		0.3044
<b>Total</b>	<b>0.5972</b>	<b>0.0434</b>	<b>1.1827</b>	<b>2.6000e-003</b>		<b>0.1537</b>	<b>0.1537</b>		<b>0.1537</b>	<b>0.1537</b>	<b>18.7338</b>	<b>36.2971</b>	<b>55.0309</b>	<b>0.0562</b>	<b>1.2700e-003</b>	<b>56.8138</b>

7.0 Water Detail

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7.1 Mitigation Measures Water

8.0 Waste Detail

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8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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## 19237 301 &amp; 305 Mountain View - Orange County, Annual

## 19237 301 & 305 Mountain View

### Orange County, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	8.00	Dwelling Unit	0.20	18,152.00	23
Other Asphalt Surfaces	0.15	Acre	0.15	6,534.00	0
Other Non-Asphalt Surfaces	0.39	Acre	0.39	16,988.40	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			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



## 19237 301 &amp; 305 Mountain View - Orange County, Annual

## Project Characteristics -

Land Use - 32,452 sf (~0.74 ac) site w/ 8 condo DUs (total building square footage = 18,152 sf & building footprint = 8,744 sf), ~20% of site (~0.15 ac) paving on-site driveways/roadways, & remainder landscaping/hardscape (~0.39 ac).

Construction Phase - Anticipated start date of September 2020 with completion by the end of December 2021.

Off-road Equipment - Site preparation of only up to ~50% of the site to remove existing hardscape, trees, and landscaping associated with existing residential uses; therefore, only ~50% of CalEEMod default equipment for site preparation needed.

Grading - Site anticipated to balance. Site prep of only ~50% of site (~0.37 ac) to remove existing hardscape/trees/landscaping associated with existing residential uses.

Demolition - Existing residential buildings of ~3,165 square feet to be demolished.

Vehicle Trips - Per Trip Generation Analysis, 7.32 trips per DU per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - Up to ~15-20 trees to be planted; therefore, to be conservative, used lower estimate of ~15.

## Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - ~10.81 DU/Acre. Site is ~0.13 miles NE of OCTA Rte 64 Stop 1st-Newhope & ~3.4 miles NW of downtown Santa Ana.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	283.00
tblConstructionPhase	NumDays	10.00	28.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	1.00	3.00
tblConstructionPhase	PhaseEndDate	2/18/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	2/4/2021	11/23/2021
tblConstructionPhase	PhaseEndDate	9/14/2020	10/8/2020
tblConstructionPhase	PhaseEndDate	9/17/2020	10/22/2020
tblConstructionPhase	PhaseEndDate	2/11/2021	12/13/2021

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tblConstructionPhase	PhaseEndDate	9/15/2020	10/13/2020
tblConstructionPhase	PhaseStartDate	2/12/2021	12/14/2021
tblConstructionPhase	PhaseStartDate	9/18/2020	10/23/2020
tblConstructionPhase	PhaseStartDate	9/16/2020	10/14/2020
tblConstructionPhase	PhaseStartDate	2/5/2021	11/24/2021
tblConstructionPhase	PhaseStartDate	9/15/2020	10/9/2020
tblFireplaces	NumberGas	6.80	7.20
tblFireplaces	NumberWood	0.40	0.00
tblGrading	AcresOfGrading	0.00	0.37
tblLandUse	LandUseSquareFeet	8,000.00	18,152.00
tblLandUse	LotAcreage	0.50	0.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblSequestration	NumberOfNewTrees	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	0.40	0.00
tblWoodstoves	NumberNoncatalytic	0.40	0.00

## 2.0 Emissions Summary

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## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0398	0.3791	0.3437	6.0000e-004	0.0117	0.0216	0.0332	3.6600e-003	0.0201	0.0238	0.0000	52.7534	52.7534	0.0121	0.0000	53.0560
2021	0.1661	1.0484	0.9819	1.7700e-003	0.0257	0.0555	0.0813	6.9200e-003	0.0512	0.0581	0.0000	157.4597	157.4597	0.0413	0.0000	158.4917
<b>Maximum</b>	<b>0.1661</b>	<b>1.0484</b>	<b>0.9819</b>	<b>1.7700e-003</b>	<b>0.0257</b>	<b>0.0555</b>	<b>0.0813</b>	<b>6.9200e-003</b>	<b>0.0512</b>	<b>0.0581</b>	<b>0.0000</b>	<b>157.4597</b>	<b>157.4597</b>	<b>0.0413</b>	<b>0.0000</b>	<b>158.4917</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0398	0.3791	0.3437	6.0000e-004	9.0100e-003	0.0216	0.0306	2.6200e-003	0.0201	0.0227	0.0000	52.7533	52.7533	0.0121	0.0000	53.0559
2021	0.1661	1.0484	0.9819	1.7700e-003	0.0257	0.0555	0.0813	6.9200e-003	0.0512	0.0581	0.0000	157.4595	157.4595	0.0413	0.0000	158.4915
<b>Maximum</b>	<b>0.1661</b>	<b>1.0484</b>	<b>0.9819</b>	<b>1.7700e-003</b>	<b>0.0257</b>	<b>0.0555</b>	<b>0.0813</b>	<b>6.9200e-003</b>	<b>0.0512</b>	<b>0.0581</b>	<b>0.0000</b>	<b>157.4595</b>	<b>157.4595</b>	<b>0.0413</b>	<b>0.0000</b>	<b>158.4915</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.16</b>	<b>0.00</b>	<b>2.33</b>	<b>9.83</b>	<b>0.00</b>	<b>1.27</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2020	11-30-2020	0.2983	0.2983
2	12-1-2020	2-28-2021	0.3117	0.3117
3	3-1-2021	5-31-2021	0.3068	0.3068
4	6-1-2021	8-31-2021	0.3067	0.3067
5	9-1-2021	9-30-2021	0.1000	0.1000
		Highest	0.3117	0.3117

## 2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0758	2.4500e-003	0.0832	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	1.8638	1.8638	1.6000e-004	3.0000e-005	1.8773
Energy	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	16.0513	16.0513	5.4000e-004	1.9000e-004	16.1216
Mobile	0.0151	0.0662	0.2089	8.2000e-004	0.0759	6.0000e-004	0.0765	0.0203	5.6000e-004	0.0209	0.0000	75.4427	75.4427	3.0700e-003	0.0000	75.5193
Waste						0.0000	0.0000		0.0000	0.0000	0.7470	0.0000	0.7470	0.0442	0.0000	1.8507
Water						0.0000	0.0000		0.0000	0.0000	0.1654	3.3257	3.4911	0.0171	4.3000e-004	4.0471
<b>Total</b>	<b>0.0914</b>	<b>0.0734</b>	<b>0.2942</b>	<b>8.6000e-004</b>	<b>0.0759</b>	<b>1.5600e-003</b>	<b>0.0775</b>	<b>0.0203</b>	<b>1.5200e-003</b>	<b>0.0219</b>	<b>0.9124</b>	<b>96.6834</b>	<b>97.5957</b>	<b>0.0650</b>	<b>6.5000e-004</b>	<b>99.4159</b>

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**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0758	2.4500e-003	0.0832	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	1.8638	1.8638	1.6000e-004	3.0000e-005	1.8773
Energy	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	16.0513	16.0513	5.4000e-004	1.9000e-004	16.1216
Mobile	0.0129	0.0525	0.1512	5.5000e-004	0.0503	4.2000e-004	0.0508	0.0135	3.9000e-004	0.0139	0.0000	51.0345	51.0345	2.1800e-003	0.0000	51.0890
Waste						0.0000	0.0000		0.0000	0.0000	0.1868	0.0000	0.1868	0.0110	0.0000	0.4627
Water						0.0000	0.0000		0.0000	0.0000	0.1654	3.3257	3.4911	0.0171	4.3000e-004	4.0471
<b>Total</b>	<b>0.0892</b>	<b>0.0597</b>	<b>0.2365</b>	<b>5.9000e-004</b>	<b>0.0503</b>	<b>1.3800e-003</b>	<b>0.0517</b>	<b>0.0135</b>	<b>1.3500e-003</b>	<b>0.0148</b>	<b>0.3521</b>	<b>72.2752</b>	<b>72.6273</b>	<b>0.0310</b>	<b>6.5000e-004</b>	<b>73.5976</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>2.37</b>	<b>18.68</b>	<b>19.62</b>	<b>31.40</b>	<b>33.69</b>	<b>11.54</b>	<b>33.24</b>	<b>33.69</b>	<b>11.18</b>	<b>32.13</b>	<b>61.41</b>	<b>25.25</b>	<b>25.58</b>	<b>52.28</b>	<b>0.00</b>	<b>25.97</b>

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**2.3 Vegetation****Vegetation**

	CO2e
Category	MT
New Trees	10.6200
Total	10.6200

**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	9/1/2020	10/8/2020	5	28	
2	Site Preparation	Site Preparation	10/9/2020	10/13/2020	5	3	
3	Grading	Grading	10/14/2020	10/22/2020	5	7	
4	Building Construction	Building Construction	10/23/2020	11/23/2021	5	283	
5	Paving	Paving	11/24/2021	12/13/2021	5	14	
6	Architectural Coating	Architectural Coating	12/14/2021	12/31/2021	5	14	

**Acres of Grading (Site Preparation Phase): 0.37****Acres of Grading (Grading Phase): 0****Acres of Paving: 0.54**

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**Residential Indoor: 36,758; Residential Outdoor: 12,253; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,411 (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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**Trips and VMT**

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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	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	16.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5600e-003	0.0000	1.5600e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1102	0.1067	1.7000e-004		6.5400e-003	6.5400e-003		6.2400e-003	6.2400e-003	0.0000	14.5706	14.5706	2.7500e-003	0.0000	14.6394
<b>Total</b>	<b>0.0121</b>	<b>0.1102</b>	<b>0.1067</b>	<b>1.7000e-004</b>	<b>1.5600e-003</b>	<b>6.5400e-003</b>	<b>8.1000e-003</b>	<b>2.4000e-004</b>	<b>6.2400e-003</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>14.5706</b>	<b>14.5706</b>	<b>2.7500e-003</b>	<b>0.0000</b>	<b>14.6394</b>



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**3.2 Demolition - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9900e-003	5.0000e-004	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5383	0.5383	6.0000e-005	0.0000	0.5397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.3400e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3302	1.3302	3.0000e-005	0.0000	1.3310
<b>Total</b>	<b>6.0000e-004</b>	<b>2.3700e-003</b>	<b>4.8400e-003</b>	<b>2.0000e-005</b>	<b>1.6600e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>4.4000e-004</b>	<b>2.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.8685</b>	<b>1.8685</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.8707</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1102	0.1067	1.7000e-004		6.5400e-003	6.5400e-003		6.2400e-003	6.2400e-003	0.0000	14.5705	14.5705	2.7500e-003	0.0000	14.6394
<b>Total</b>	<b>0.0121</b>	<b>0.1102</b>	<b>0.1067</b>	<b>1.7000e-004</b>	<b>6.1000e-004</b>	<b>6.5400e-003</b>	<b>7.1500e-003</b>	<b>9.0000e-005</b>	<b>6.2400e-003</b>	<b>6.3300e-003</b>	<b>0.0000</b>	<b>14.5705</b>	<b>14.5705</b>	<b>2.7500e-003</b>	<b>0.0000</b>	<b>14.6394</b>

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**3.2 Demolition - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9900e-003	5.0000e-004	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5383	0.5383	6.0000e-005	0.0000	0.5397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.3400e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.3302	1.3302	3.0000e-005	0.0000	1.3310
<b>Total</b>	<b>6.0000e-004</b>	<b>2.3700e-003</b>	<b>4.8400e-003</b>	<b>2.0000e-005</b>	<b>1.6600e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>4.4000e-004</b>	<b>2.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.8685</b>	<b>1.8685</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.8707</b>

**3.3 Site Preparation - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-004	0.0000	2.0000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-004	3.1600e-003	3.4200e-003	0.0000		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4126
<b>Total</b>	<b>3.1000e-004</b>	<b>3.1600e-003</b>	<b>3.4200e-003</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>2.0000e-004</b>	<b>4.0000e-004</b>	<b>2.0000e-005</b>	<b>1.8000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.4093</b>	<b>0.4093</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4126</b>

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**3.3 Site Preparation - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0713	0.0713	0.0000	0.0000	0.0713
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0713</b>	<b>0.0713</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0713</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-005	0.0000	8.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-004	3.1600e-003	3.4200e-003	0.0000		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.4093	0.4093	1.3000e-004	0.0000	0.4126
<b>Total</b>	<b>3.1000e-004</b>	<b>3.1600e-003</b>	<b>3.4200e-003</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-004</b>	<b>2.8000e-004</b>	<b>1.0000e-005</b>	<b>1.8000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.4093</b>	<b>0.4093</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4126</b>

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**3.3 Site Preparation - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0713	0.0713	0.0000	0.0000	0.0713
<b>Total</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0713</b>	<b>0.0713</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0713</b>

**3.4 Grading - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6300e-003	0.0000	2.6300e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0400e-003	0.0276	0.0267	4.0000e-005		1.6400e-003	1.6400e-003		1.5600e-003	1.5600e-003	0.0000	3.6426	3.6426	6.9000e-004	0.0000	3.6599
<b>Total</b>	<b>3.0400e-003</b>	<b>0.0276</b>	<b>0.0267</b>	<b>4.0000e-005</b>	<b>2.6300e-003</b>	<b>1.6400e-003</b>	<b>4.2700e-003</b>	<b>1.4500e-003</b>	<b>1.5600e-003</b>	<b>3.0100e-003</b>	<b>0.0000</b>	<b>3.6426</b>	<b>3.6426</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>3.6599</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**3.4 Grading - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0800e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3326	0.3326	1.0000e-005	0.0000	0.3328
<b>Total</b>	<b>1.4000e-004</b>	<b>1.0000e-004</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.9000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3326</b>	<b>0.3326</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3328</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0300e-003	0.0000	1.0300e-003	5.6000e-004	0.0000	5.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0400e-003	0.0276	0.0267	4.0000e-005		1.6400e-003	1.6400e-003		1.5600e-003	1.5600e-003	0.0000	3.6426	3.6426	6.9000e-004	0.0000	3.6599
<b>Total</b>	<b>3.0400e-003</b>	<b>0.0276</b>	<b>0.0267</b>	<b>4.0000e-005</b>	<b>1.0300e-003</b>	<b>1.6400e-003</b>	<b>2.6700e-003</b>	<b>5.6000e-004</b>	<b>1.5600e-003</b>	<b>2.1200e-003</b>	<b>0.0000</b>	<b>3.6426</b>	<b>3.6426</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>3.6599</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**3.4 Grading - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0800e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3326	0.3326	1.0000e-005	0.0000	0.3328
<b>Total</b>	<b>1.4000e-004</b>	<b>1.0000e-004</b>	<b>1.0800e-003</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.9000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3326</b>	<b>0.3326</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3328</b>

**3.5 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0215	0.2213	0.1847	2.8000e-004		0.0131	0.0131		0.0120	0.0120	0.0000	25.0151	25.0151	8.0900e-003	0.0000	25.2174
<b>Total</b>	<b>0.0215</b>	<b>0.2213</b>	<b>0.1847</b>	<b>2.8000e-004</b>		<b>0.0131</b>	<b>0.0131</b>		<b>0.0120</b>	<b>0.0120</b>	<b>0.0000</b>	<b>25.0151</b>	<b>25.0151</b>	<b>8.0900e-003</b>	<b>0.0000</b>	<b>25.2174</b>

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**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0133	3.6100e-003	3.0000e-005	7.9000e-004	7.0000e-005	8.6000e-004	2.3000e-004	7.0000e-005	2.9000e-004	0.0000	3.0428	3.0428	2.5000e-004	0.0000	3.0492
Worker	1.5600e-003	1.0900e-003	0.0124	4.0000e-005	4.3900e-003	3.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.1900e-003	0.0000	3.8006	3.8006	9.0000e-005	0.0000	3.8028
<b>Total</b>	<b>1.9700e-003</b>	<b>0.0144</b>	<b>0.0160</b>	<b>7.0000e-005</b>	<b>5.1800e-003</b>	<b>1.0000e-004</b>	<b>5.2800e-003</b>	<b>1.4000e-003</b>	<b>1.0000e-004</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>6.8435</b>	<b>6.8435</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.8520</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0215	0.2213	0.1847	2.8000e-004		0.0131	0.0131		0.0120	0.0120	0.0000	25.0151	25.0151	8.0900e-003	0.0000	25.2174
<b>Total</b>	<b>0.0215</b>	<b>0.2213</b>	<b>0.1847</b>	<b>2.8000e-004</b>		<b>0.0131</b>	<b>0.0131</b>		<b>0.0120</b>	<b>0.0120</b>	<b>0.0000</b>	<b>25.0151</b>	<b>25.0151</b>	<b>8.0900e-003</b>	<b>0.0000</b>	<b>25.2174</b>

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**3.5 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0133	3.6100e-003	3.0000e-005	7.9000e-004	7.0000e-005	8.6000e-004	2.3000e-004	7.0000e-005	2.9000e-004	0.0000	3.0428	3.0428	2.5000e-004	0.0000	3.0492
Worker	1.5600e-003	1.0900e-003	0.0124	4.0000e-005	4.3900e-003	3.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.1900e-003	0.0000	3.8006	3.8006	9.0000e-005	0.0000	3.8028
<b>Total</b>	<b>1.9700e-003</b>	<b>0.0144</b>	<b>0.0160</b>	<b>7.0000e-005</b>	<b>5.1800e-003</b>	<b>1.0000e-004</b>	<b>5.2800e-003</b>	<b>1.4000e-003</b>	<b>1.0000e-004</b>	<b>1.4800e-003</b>	<b>0.0000</b>	<b>6.8435</b>	<b>6.8435</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.8520</b>

**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	tons/yr										MT/yr					
Off-Road	0.0903	0.9303	0.8462	1.3300e-003		0.0521	0.0521		0.0480	0.0480	0.0000	116.5956	116.5956	0.0377	0.0000	117.5383
<b>Total</b>	<b>0.0903</b>	<b>0.9303</b>	<b>0.8462</b>	<b>1.3300e-003</b>		<b>0.0521</b>	<b>0.0521</b>		<b>0.0480</b>	<b>0.0480</b>	<b>0.0000</b>	<b>116.5956</b>	<b>116.5956</b>	<b>0.0377</b>	<b>0.0000</b>	<b>117.5383</b>



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**3.5 Building Construction - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5900e-003	0.0555	0.0156	1.4000e-004	3.6700e-003	1.2000e-004	3.7800e-003	1.0600e-003	1.1000e-004	1.1700e-003	0.0000	14.0574	14.0574	1.1400e-003	0.0000	14.0858
Worker	6.8300e-003	4.5900e-003	0.0536	1.9000e-004	0.0205	1.3000e-004	0.0206	5.4300e-003	1.2000e-004	5.5600e-003	0.0000	17.0964	17.0964	3.7000e-004	0.0000	17.1056
<b>Total</b>	<b>8.4200e-003</b>	<b>0.0601</b>	<b>0.0691</b>	<b>3.3000e-004</b>	<b>0.0241</b>	<b>2.5000e-004</b>	<b>0.0244</b>	<b>6.4900e-003</b>	<b>2.3000e-004</b>	<b>6.7300e-003</b>	<b>0.0000</b>	<b>31.1538</b>	<b>31.1538</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>31.1914</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0903	0.9303	0.8462	1.3300e-003		0.0521	0.0521		0.0480	0.0480	0.0000	116.5955	116.5955	0.0377	0.0000	117.5382
<b>Total</b>	<b>0.0903</b>	<b>0.9303</b>	<b>0.8462</b>	<b>1.3300e-003</b>		<b>0.0521</b>	<b>0.0521</b>		<b>0.0480</b>	<b>0.0480</b>	<b>0.0000</b>	<b>116.5955</b>	<b>116.5955</b>	<b>0.0377</b>	<b>0.0000</b>	<b>117.5382</b>

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**3.5 Building Construction - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5900e-003	0.0555	0.0156	1.4000e-004	3.6700e-003	1.2000e-004	3.7800e-003	1.0600e-003	1.1000e-004	1.1700e-003	0.0000	14.0574	14.0574	1.1400e-003	0.0000	14.0858
Worker	6.8300e-003	4.5900e-003	0.0536	1.9000e-004	0.0205	1.3000e-004	0.0206	5.4300e-003	1.2000e-004	5.5600e-003	0.0000	17.0964	17.0964	3.7000e-004	0.0000	17.1056
<b>Total</b>	<b>8.4200e-003</b>	<b>0.0601</b>	<b>0.0691</b>	<b>3.3000e-004</b>	<b>0.0241</b>	<b>2.5000e-004</b>	<b>0.0244</b>	<b>6.4900e-003</b>	<b>2.3000e-004</b>	<b>6.7300e-003</b>	<b>0.0000</b>	<b>31.1538</b>	<b>31.1538</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>31.1914</b>

**3.6 Paving - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0500e-003	0.0470	0.0496	8.0000e-005		2.4700e-003	2.4700e-003		2.3000e-003	2.3000e-003	0.0000	6.5747	6.5747	1.9200e-003	0.0000	6.6226
Paving	2.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.2500e-003</b>	<b>0.0470</b>	<b>0.0496</b>	<b>8.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>6.5747</b>	<b>6.5747</b>	<b>1.9200e-003</b>	<b>0.0000</b>	<b>6.6226</b>

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**3.6 Paving - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.1000e-004	3.6200e-003	1.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1557	1.1557	2.0000e-005	0.0000	1.1563
<b>Total</b>	<b>4.6000e-004</b>	<b>3.1000e-004</b>	<b>3.6200e-003</b>	<b>1.0000e-005</b>	<b>1.3800e-003</b>	<b>1.0000e-005</b>	<b>1.3900e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1557</b>	<b>1.1557</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.1563</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0500e-003	0.0470	0.0496	8.0000e-005		2.4700e-003	2.4700e-003		2.3000e-003	2.3000e-003	0.0000	6.5747	6.5747	1.9200e-003	0.0000	6.6226
Paving	2.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.2500e-003</b>	<b>0.0470</b>	<b>0.0496</b>	<b>8.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>6.5747</b>	<b>6.5747</b>	<b>1.9200e-003</b>	<b>0.0000</b>	<b>6.6226</b>

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**3.6 Paving - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.1000e-004	3.6200e-003	1.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.1557	1.1557	2.0000e-005	0.0000	1.1563
<b>Total</b>	<b>4.6000e-004</b>	<b>3.1000e-004</b>	<b>3.6200e-003</b>	<b>1.0000e-005</b>	<b>1.3800e-003</b>	<b>1.0000e-005</b>	<b>1.3900e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1557</b>	<b>1.1557</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.1563</b>

**3.7 Architectural Coating - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	0.0107	0.0127	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7903
<b>Total</b>	<b>0.0616</b>	<b>0.0107</b>	<b>0.0127</b>	<b>2.0000e-005</b>		<b>6.6000e-004</b>	<b>6.6000e-004</b>		<b>6.6000e-004</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.7873</b>	<b>1.7873</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.7903</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**3.7 Architectural Coating - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.0000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1926	0.1926	0.0000	0.0000	0.1927
<b>Total</b>	<b>8.0000e-005</b>	<b>5.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>2.3000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>0.1926</b>	<b>0.1926</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1927</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	0.0107	0.0127	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7903
<b>Total</b>	<b>0.0616</b>	<b>0.0107</b>	<b>0.0127</b>	<b>2.0000e-005</b>		<b>6.6000e-004</b>	<b>6.6000e-004</b>		<b>6.6000e-004</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.7873</b>	<b>1.7873</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>1.7903</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**3.7 Architectural Coating - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	6.0000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1926	0.1926	0.0000	0.0000	0.1927
<b>Total</b>	<b>8.0000e-005</b>	<b>5.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>2.3000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>0.1926</b>	<b>0.1926</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1927</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0129	0.0525	0.1512	5.5000e-004	0.0503	4.2000e-004	0.0508	0.0135	3.9000e-004	0.0139	0.0000	51.0345	51.0345	2.1800e-003	0.0000	51.0890
Unmitigated	0.0151	0.0662	0.2089	8.2000e-004	0.0759	6.0000e-004	0.0765	0.0203	5.6000e-004	0.0209	0.0000	75.4427	75.4427	3.0700e-003	0.0000	75.5193

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	58.56	58.56	58.56	200,108	132,697
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	58.56	58.56	58.56	200,108	132,697

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Other Non-Asphalt Surfaces	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.6041	10.6041	4.4000e-004	9.0000e-005	10.6420
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.6041	10.6041	4.4000e-004	9.0000e-005	10.6420
NaturalGas Mitigated	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4472	5.4472	1.0000e-004	1.0000e-004	5.4796
NaturalGas Unmitigated	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4472	5.4472	1.0000e-004	1.0000e-004	5.4796



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**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	102077	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4472	5.4472	1.0000e-004	1.0000e-004	5.4796
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>5.5000e-004</b>	<b>4.7000e-003</b>	<b>2.0000e-003</b>	<b>3.0000e-005</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>5.4472</b>	<b>5.4472</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>5.4796</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	102077	5.5000e-004	4.7000e-003	2.0000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4472	5.4472	1.0000e-004	1.0000e-004	5.4796
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>5.5000e-004</b>	<b>4.7000e-003</b>	<b>2.0000e-003</b>	<b>3.0000e-005</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>5.4472</b>	<b>5.4472</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>5.4796</b>

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**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	33281	10.6041	4.4000e-004	9.0000e-005	10.6420
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>10.6041</b>	<b>4.4000e-004</b>	<b>9.0000e-005</b>	<b>10.6420</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	33281	10.6041	4.4000e-004	9.0000e-005	10.6420
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>10.6041</b>	<b>4.4000e-004</b>	<b>9.0000e-005</b>	<b>10.6420</b>

**6.0 Area Detail**

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0758	2.4500e-003	0.0832	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	1.8638	1.8638	1.6000e-004	3.0000e-005	1.8773
Unmitigated	0.0758	2.4500e-003	0.0832	1.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	1.8638	1.8638	1.6000e-004	3.0000e-005	1.8773

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0671					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.7000e-004	1.4900e-003	6.4000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7290	1.7290	3.0000e-005	3.0000e-005	1.7393
Landscaping	2.5000e-003	9.5000e-004	0.0826	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1348	0.1348	1.3000e-004	0.0000	0.1380
<b>Total</b>	<b>0.0758</b>	<b>2.4400e-003</b>	<b>0.0832</b>	<b>1.0000e-005</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>1.8638</b>	<b>1.8638</b>	<b>1.6000e-004</b>	<b>3.0000e-005</b>	<b>1.8773</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**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	tons/yr										MT/yr					
Architectural Coating	6.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0671					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.7000e-004	1.4900e-003	6.4000e-004	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7290	1.7290	3.0000e-005	3.0000e-005	1.7393
Landscaping	2.5000e-003	9.5000e-004	0.0826	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1348	0.1348	1.3000e-004	0.0000	0.1380
<b>Total</b>	<b>0.0758</b>	<b>2.4400e-003</b>	<b>0.0832</b>	<b>1.0000e-005</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>1.8638</b>	<b>1.8638</b>	<b>1.6000e-004</b>	<b>3.0000e-005</b>	<b>1.8773</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.4911	0.0171	4.3000e-004	4.0471
Unmitigated	3.4911	0.0171	4.3000e-004	4.0471

## 7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.521232 / 0.328603	3.4911	0.0171	4.3000e-004	4.0471
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.4911</b>	<b>0.0171</b>	<b>4.3000e-004</b>	<b>4.0471</b>

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.521232 / 0.328603	3.4911	0.0171	4.3000e-004	4.0471
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.4911</b>	<b>0.0171</b>	<b>4.3000e-004</b>	<b>4.0471</b>

**8.0 Waste Detail****8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1868	0.0110	0.0000	0.4627
Unmitigated	0.7470	0.0442	0.0000	1.8507

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	3.68	0.7470	0.0442	0.0000	1.8507
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.7470</b>	<b>0.0442</b>	<b>0.0000</b>	<b>1.8507</b>



## 19237 301 &amp; 305 Mountain View - Orange County, Annual

**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	0.92	0.1868	0.0110	0.0000	0.4627
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1868</b>	<b>0.0110</b>	<b>0.0000</b>	<b>0.4627</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	10.6200	0.0000	0.0000	10.6200

**11.2 Net New Trees****Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	15	10.6200	0.0000	0.0000	10.6200
<b>Total</b>		<b>10.6200</b>	<b>0.0000</b>	<b>0.0000</b>	<b>10.6200</b>

19237 301 &amp; 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY - Orange County, Annual

## 19237 301 & 305 Mountain View - Existing Use OPERATIONAL ANALYSIS ONLY

### Orange County, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	2.00	Dwelling Unit	0.74	3,165.00	6

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	30
<b>Climate Zone</b>	8	<b>Operational Year</b>	2020		
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing Use OPERATIONAL ANALYSIS ONLY

Land Use - 32,452 sf (~0.74 ac) site with 2 existing single-family detached residential dwelling units totaling ~3,165 sf.

Vehicle Trips - Per Trip Generation Analysis, 9.44 trips/DU/day.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,600.00	3,165.00
tblLandUse	LotAcreage	0.65	0.74
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

## 2.0 Emissions Summary

### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0196	7.6000e-004	0.0334	3.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.2124	0.4419	0.6544	6.7000e-004	1.0000e-005	0.6753
Energy	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	7.8639	7.8639	2.6000e-004	9.0000e-005	7.8985
Mobile	5.6300e-003	0.0254	0.0777	2.8000e-004	0.0245	2.8000e-004	0.0248	6.5500e-003	2.7000e-004	6.8200e-003	0.0000	25.8073	25.8073	1.1000e-003	0.0000	25.8349
Waste						0.0000	0.0000		0.0000	0.0000	0.4994	0.0000	0.4994	0.0295	0.0000	1.2371
Water						0.0000	0.0000		0.0000	0.0000	0.0413	0.8314	0.8728	4.2800e-003	1.1000e-004	1.0118
<b>Total</b>	<b>0.0255</b>	<b>0.0285</b>	<b>0.1122</b>	<b>3.3000e-004</b>	<b>0.0245</b>	<b>2.4900e-003</b>	<b>0.0270</b>	<b>6.5500e-003</b>	<b>2.4800e-003</b>	<b>9.0300e-003</b>	<b>0.7531</b>	<b>34.9445</b>	<b>35.6977</b>	<b>0.0358</b>	<b>2.1000e-004</b>	<b>36.6576</b>

#### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0196	7.6000e-004	0.0334	3.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.2124	0.4419	0.6544	6.7000e-004	1.0000e-005	0.6753
Energy	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	7.8639	7.8639	2.6000e-004	9.0000e-005	7.8985
Mobile	5.6300e-003	0.0254	0.0777	2.8000e-004	0.0245	2.8000e-004	0.0248	6.5500e-003	2.7000e-004	6.8200e-003	0.0000	25.8073	25.8073	1.1000e-003	0.0000	25.8349
Waste						0.0000	0.0000		0.0000	0.0000	0.4994	0.0000	0.4994	0.0295	0.0000	1.2371
Water						0.0000	0.0000		0.0000	0.0000	0.0413	0.8314	0.8728	4.2800e-003	1.1000e-004	1.0118
<b>Total</b>	<b>0.0255</b>	<b>0.0285</b>	<b>0.1122</b>	<b>3.3000e-004</b>	<b>0.0245</b>	<b>2.4900e-003</b>	<b>0.0270</b>	<b>6.5500e-003</b>	<b>2.4800e-003</b>	<b>9.0300e-003</b>	<b>0.7531</b>	<b>34.9445</b>	<b>35.6977</b>	<b>0.0358</b>	<b>2.1000e-004</b>	<b>36.6576</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.6300e-003	0.0254	0.0777	2.8000e-004	0.0245	2.8000e-004	0.0248	6.5500e-003	2.7000e-004	6.8200e-003	0.0000	25.8073	25.8073	1.1000e-003	0.0000	25.8349
Unmitigated	5.6300e-003	0.0254	0.0777	2.8000e-004	0.0245	2.8000e-004	0.0248	6.5500e-003	2.7000e-004	6.8200e-003	0.0000	25.8073	25.8073	1.1000e-003	0.0000	25.8349

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	18.88	18.88	18.88	64,516	64,516
Total	18.88	18.88	18.88	64,516	64,516

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5.1098	5.1098	2.1000e-004	4.0000e-005	5.1280
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5.1098	5.1098	2.1000e-004	4.0000e-005	5.1280
NaturalGas Mitigated	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7541	2.7541	5.0000e-005	5.0000e-005	2.7705
NaturalGas Unmitigated	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7541	2.7541	5.0000e-005	5.0000e-005	2.7705

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	51609.8	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7541	2.7541	5.0000e-005	5.0000e-005	2.7705
<b>Total</b>		<b>2.8000e-004</b>	<b>2.3800e-003</b>	<b>1.0100e-003</b>	<b>2.0000e-005</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.7541</b>	<b>2.7541</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>2.7705</b>

#### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	51609.8	2.8000e-004	2.3800e-003	1.0100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7541	2.7541	5.0000e-005	5.0000e-005	2.7705
<b>Total</b>		<b>2.8000e-004</b>	<b>2.3800e-003</b>	<b>1.0100e-003</b>	<b>2.0000e-005</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.7541</b>	<b>2.7541</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>2.7705</b>

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	16037.1	5.1098	2.1000e-004	4.0000e-005	5.1280
Total		5.1098	2.1000e-004	4.0000e-005	5.1280

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	16037.1	5.1098	2.1000e-004	4.0000e-005	5.1280
Total		5.1098	2.1000e-004	4.0000e-005	5.1280

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0196	7.6000e-004	0.0334	3.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.2124	0.4419	0.6544	6.7000e-004	1.0000e-005	0.6753
Unmitigated	0.0196	7.6000e-004	0.0334	3.0000e-005		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.2124	0.4419	0.6544	6.7000e-004	1.0000e-005	0.6753

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.5500e-003	5.2000e-004	0.0127	3.0000e-005		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.2124	0.4082	0.6207	6.3000e-004	1.0000e-005	0.6408
Landscaping	6.3000e-004	2.4000e-004	0.0207	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0337	0.0337	3.0000e-005	0.0000	0.0345
<b>Total</b>	<b>0.0196</b>	<b>7.6000e-004</b>	<b>0.0334</b>	<b>3.0000e-005</b>		<b>2.0200e-003</b>	<b>2.0200e-003</b>		<b>2.0200e-003</b>	<b>2.0200e-003</b>	<b>0.2124</b>	<b>0.4419</b>	<b>0.6544</b>	<b>6.6000e-004</b>	<b>1.0000e-005</b>	<b>0.6753</b>

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.5500e-003	5.2000e-004	0.0127	3.0000e-005		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.2124	0.4082	0.6207	6.3000e-004	1.0000e-005	0.6408
Landscaping	6.3000e-004	2.4000e-004	0.0207	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0337	0.0337	3.0000e-005	0.0000	0.0345
<b>Total</b>	<b>0.0196</b>	<b>7.6000e-004</b>	<b>0.0334</b>	<b>3.0000e-005</b>		<b>2.0200e-003</b>	<b>2.0200e-003</b>		<b>2.0200e-003</b>	<b>2.0200e-003</b>	<b>0.2124</b>	<b>0.4419</b>	<b>0.6544</b>	<b>6.6000e-004</b>	<b>1.0000e-005</b>	<b>0.6753</b>



## 7.0 Water Detail

---

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8728	4.2800e-003	1.1000e-004	1.0118
Unmitigated	0.8728	4.2800e-003	1.1000e-004	1.0118

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.130308 / 0.0821507	0.8728	4.2800e-003	1.1000e-004	1.0118
<b>Total</b>		<b>0.8728</b>	<b>4.2800e-003</b>	<b>1.1000e-004</b>	<b>1.0118</b>

#### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.130308 / 0.0821507	0.8728	4.2800e-003	1.1000e-004	1.0118
<b>Total</b>		<b>0.8728</b>	<b>4.2800e-003</b>	<b>1.1000e-004</b>	<b>1.0118</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4994	0.0295	0.0000	1.2371
Unmitigated	0.4994	0.0295	0.0000	1.2371

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		0.4994	0.0295	0.0000	1.2371

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	2.46	0.4994	0.0295	0.0000	1.2371
Total		0.4994	0.0295	0.0000	1.2371

9.0 Operational Offroad

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

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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
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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## Appendix B:

# Cultural Resources


**ARCHAEOLOGICAL SURVEY  
AND HISTORIC EVALUATION REPORT  
FOR THE  
GENERAL PLAN AMENDMENT AT  
301 & 305 NORTH MOUNTAIN VIEW STREET,  
CITY OF SANTA ANA, CALIFORNIA  
(DP-2018-22)**

**Prepared for:**

Ms. Lori E. Trottier  
Environmental Project Manager  
Infrastructure Engineering Corporation  
300 Spectrum Center Drive, Suite 400  
Irvine, CA 92618

**Prepared by:**

Laguna Mountain Environmental, Inc.  
7969 Engineer Road, Suite 208  
San Diego, CA 92111



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Andrew R. Pignuolo, MA, RPA

April 2020



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**Laguna Mountain Environmental, Inc.**

**ARCHAEOLOGICAL SURVEY  
AND HISTORIC EVALUATION REPORT  
FOR THE  
GENERAL PLAN AMENDMENT AT  
301 & 305 NORTH MOUNTAIN VIEW STREET,  
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Andrew R. Pignuolo, MA, RPA

April 2020

**National Archaeological Data Base Information**

*Type of Study:* Cultural Resource Survey and Historic Resource Evaluation

*Sites:* NMV-H-1, NMV-H-2, and NMV-H-3

*USGS Quadrangle:* Newport Beach 7.5'

*Area:* 0.74 Acres

*Key Words:* City of Santa Ana, 301 North Mountain View St. (NMV-H-1), 301 North Mountain View St. - Rear (NMV-H-2), 305 North Mountain View St. (NMV-H-3), archaeological survey, historic resource evaluation, historic-age structures

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## ABSTRACT

Laguna Mountain Environmental, Inc. conducted a cultural resource survey and historic structure evaluation for the proposed Mountain View Street Condominium Project in the City of Santa Ana. The survey included the entire project area and the historic structure evaluation addressed the three standing structures within the project area. This investigation included a records search, literature review, examination of historic maps, chain-of-title research, and a cultural resource survey of the project area.

The current survey program was conducted in accordance with the California Environmental Quality Act (CEQA) and guidelines. The City of Santa Ana will serve as lead agency for the project and CEQA compliance.

A records search was conducted at the South Central Coastal Information Center at California State University, Fullerton. The record search indicated that the project area has not been previously surveyed for cultural resources, and that no cultural resources have been recorded within a one mile radius of the project area or within the project. Twenty-eight previous investigations have been conducted within one mile but none on or adjacent to the project area. One historic residence is recorded, several blocks to the north (801 N. Mountain View Street).

A cultural resource survey of the project area was conducted on March 6, 2020 by Mr. Andrew R. Pignolo. The survey included a surface walk-over of the entire project area in 5 to 10 m interval transects. Overall surface visibility averaged 20 percent with fairly dense vegetation cover.

The survey did not result in the identification of any cultural material. No prehistoric or historic archaeological material was identified within the project area.

Three structures of historic age (301 North Mountain View Street [NMV-H-1], Rear Structure at 301 North Mountain View Street [NMV-H-2], and 305 North Mountain View Street [NMV-H-3]) were identified within the project area. These represent two single-family residential structures and an associated workshop building. These structures were evaluated for historic significance. Based on a lack of integrity, insignificant design qualities, and lack of association with events or persons of historical significance, these three structures were not recommended as eligible for the California Register of Historical resources (California Register) or local registers.

Structures NMV-H-1, NMV-H-2, and NMV-H-3 do not qualify as significant under the California Register of Historical Resources (California Register) Guidelines used for CEQA review because of their lack of integrity and/or because they lack other criteria significance criteria for eligibility to the California Register. Significant impacts to cultural resources will not result from this project.

## **I. INTRODUCTION**

### **A. Project Description**

The 0.74-acre project area is located in the western portion of the City of Santa Ana in Orange County (Figure 1). The project is located northeast of Interstate 405 and south of State Route (SR) 22 and west of the Santa Ana River. The project area is north of Bolsa Avenue and south of Hazard Avenue at 301 and 305 North Mountain View Street (APN 100-28-105-00). It is located in the south east quarter of Section 9 in Township 5 South, Range 10 West. The project area is shown on the Newport Beach 7.5' USGS Quadrangle (Figure 2).

The site is currently developed with two (2) single family residences, associated parking area, and landscaping. The proposed project would demolish existing buildings and remove all of the existing improvements, including the landscaping, pavement, and parking, and redevelop the entire site by constructing four (4) buildings to house a total of eight (8) condominium units, associated parking and landscaping (Figure 3). The project would be completed in one phase and requires a General Plan Amendment (GPA) to change the land use designation of the property from Low-Medium Density Residential (LMR-11) to Medium Density Residential (MR-15) and a zone change to change the zoning from General Agricultural (A1) to Two-Family Residential (R2).

The current survey and historic evaluation program was conducted in accordance with the California Environmental Quality Act (CEQA) and guidelines. The City of Santa Ana will serve as lead agency for the project and CEQA compliance. The archaeological survey was conducted to determine if any cultural resources eligible for inclusion in the California Register of Historic Resources (California Register) or significant under CEQA would be affected by this project. Historic-age structures identified during the survey were evaluated for California Register eligibility.

### **B. Project Personnel**

The cultural resource survey and historic evaluation program was conducted by Laguna Mountain Environmental, Inc. (Laguna Mountain), whose cultural resources staff meets state and local requirements. Mr. Andrew R. Pignuolo served as Principal Investigator for the project. He also conducted the survey and prepared this technical report. Mr. Pignuolo meets the Secretary of the Interior's standards for qualified archaeologists and criteria for architectural historian. Mr. Pignuolo has an MA degree in Anthropology from San Diego State University and has more than 40 years experience in the southern California region. His resume is included in Appendix A.

Ms. Carol Serr conducted the records search, prepared the report graphics, and formatted the report. She has a B.A. in Anthropology from San Diego State University and more than 40 years of experience in southern California archaeology.

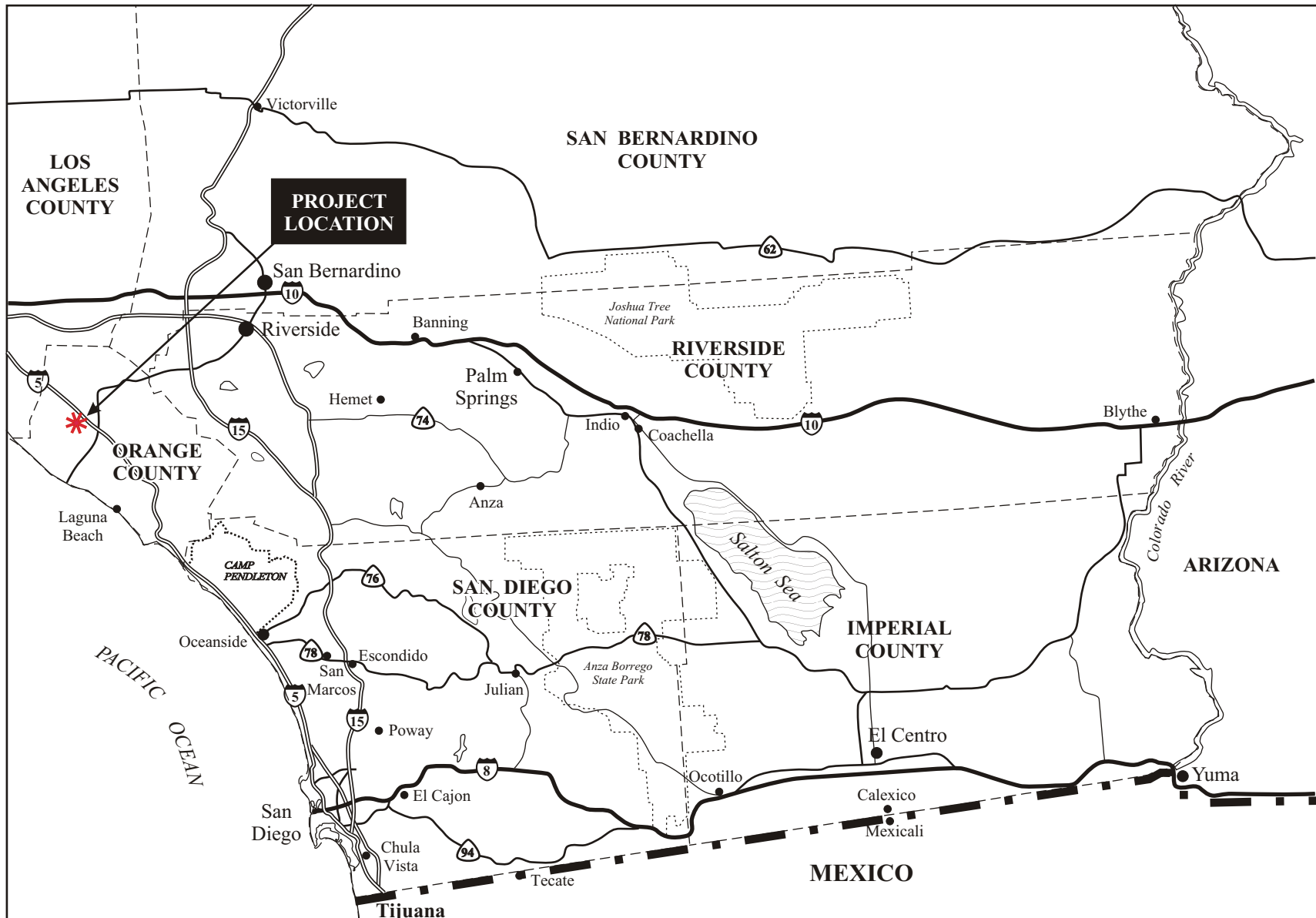
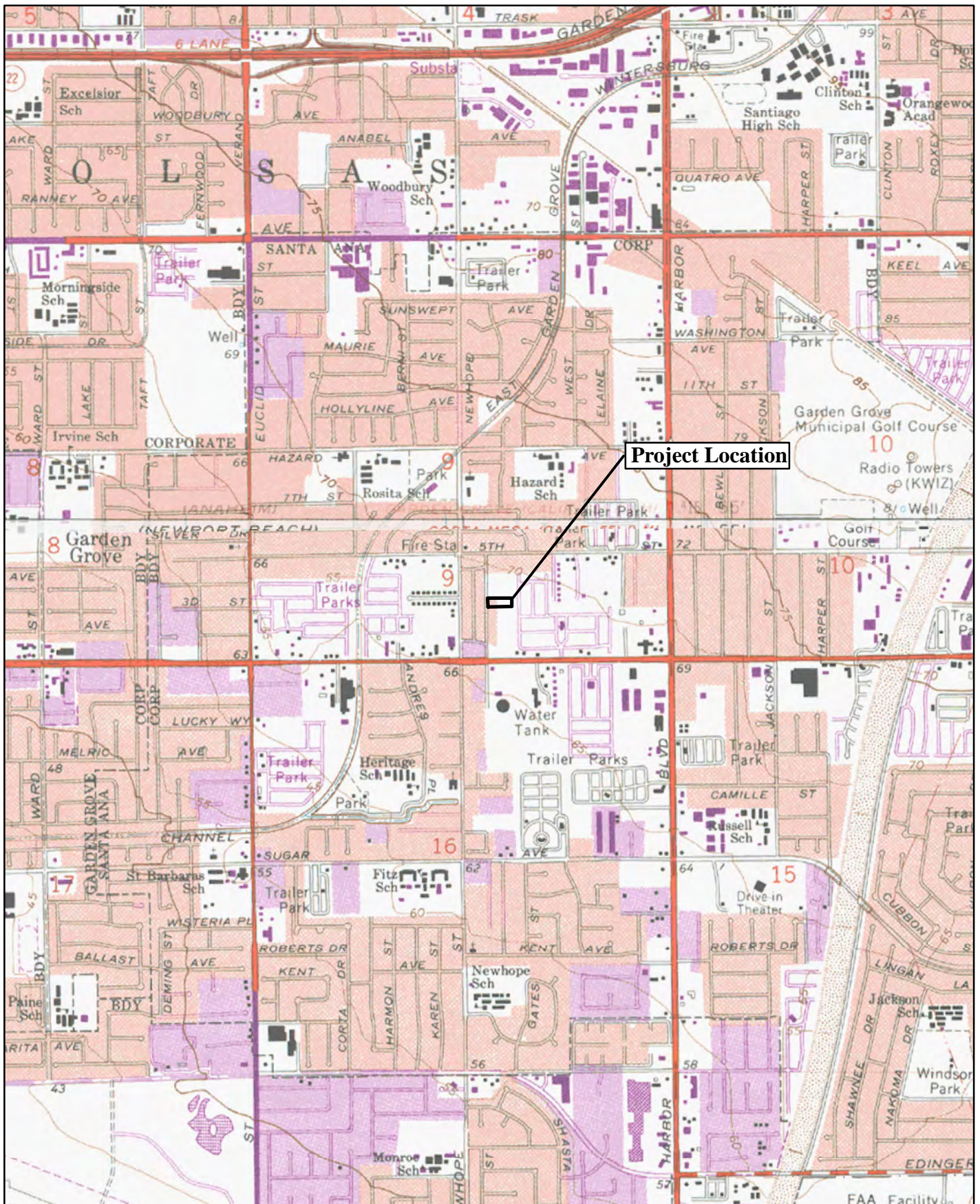


Figure 1  
Regional Location Map







Source: USGS 7.5' Newport Beach Quadrangle

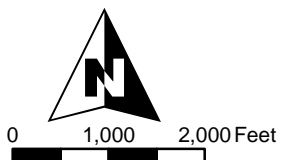


Figure 2  
Project Location





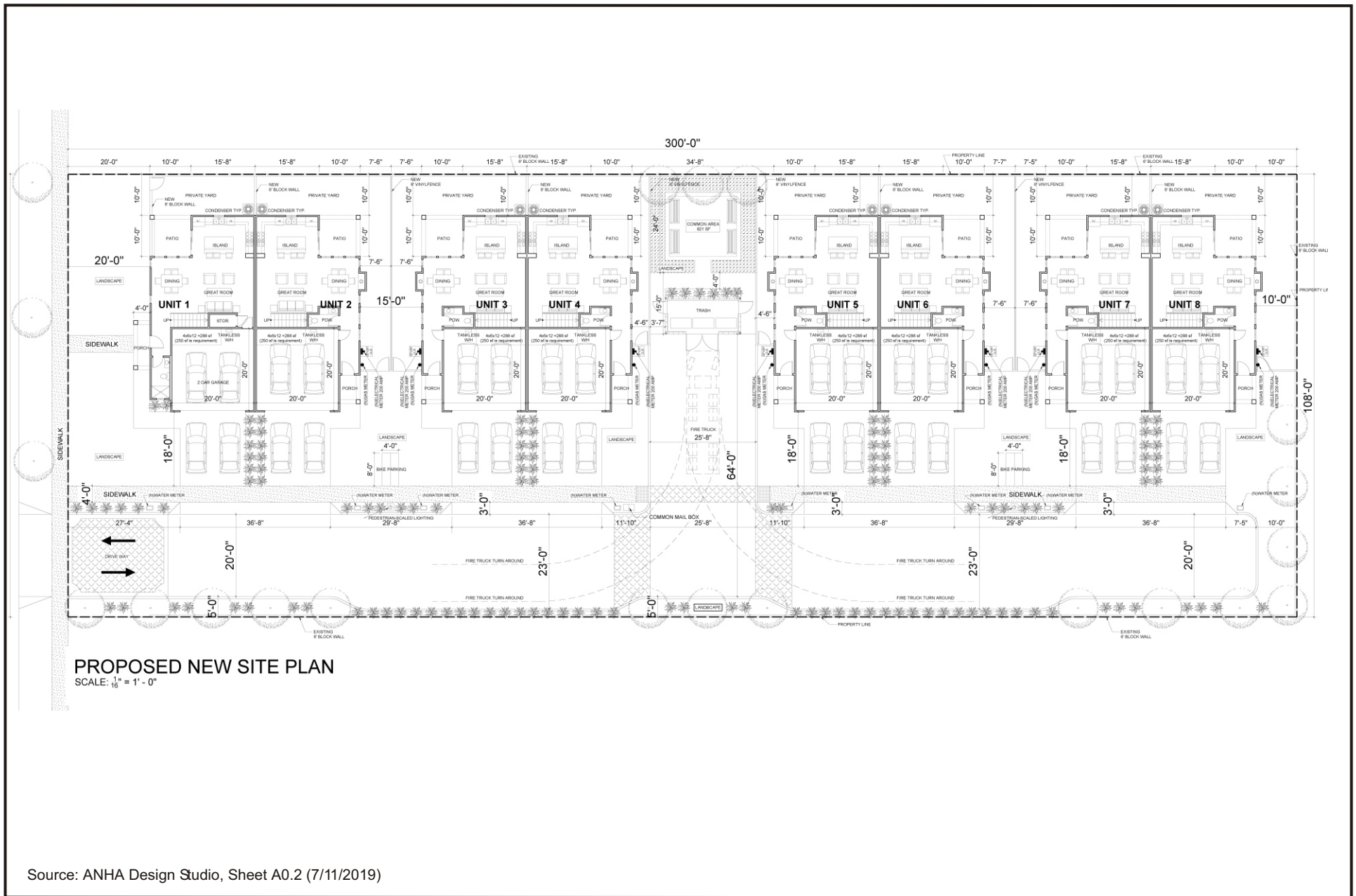


Figure 3  
 Proposed Project Plans

## **C. Structure of the Report**

This report follows the State Historic Preservation Office's guidelines for Archaeological Resource Management Reports (ARMR). The report introduction provides a description of the project and associated personnel. Section II provides background on the project area and previous research. Section III describes the research design and survey methods while Section IV describes the survey results. Section V provides the background history and evaluation of the historic-age structures within the project area. Section VI provides a summary and recommendations.

## **II. NATURAL AND CULTURAL SETTING**

The following environmental and cultural background provides a context for the cultural resource inventory and historic evaluation.

### **A. Natural Setting**

The project area is located in Orange County, in the coastal plain west of the Santa Ana River. The site is currently developed with two (2) single family residences, associated parking area, and landscaping within a larger suburban neighborhood. The project elevation is approximately 68 feet above mean sea level.

The geomorphology of the project area is largely a product of the region's geologic history. During the Jurassic and late Cretaceous (>100 million years ago) a series of volcanic islands paralleled the current coastline in the region. The remnants of these islands stand as Santiago Peak to the southeast of the project among others. This island arc of volcanos spewed out vast layers of tuff (volcanic ash) and breccia that have since been metamorphosed into hard rock of the Santiago Peak Volcanic formation. These fine-grained rocks provided a regionally important resource for Native American flaked stone tools.

As the Peninsular Batholith rose, it warped and metamorphosed the overlying sediments, forming the Bedford Canyon Metasediments. Bedford Canyon Metasediments occur as very hard black, often banded, rock with a good conchoidal fracture. This material occurs in the Santa Ana Mountains to the southeast and in scattered locations in the foothills to the east of the project area. This material was used for Native American flaked stone tools.

The Orange County Coastal Plain is underlain by a sedimentary trough that began forming in the Miocene time. The Miocene to Late Pleistocene sediments consists of interbedded marine and nonmarine sequences. The Late Pleistocene to Recent deposits are continental alluvial and fluvial sediments which represent changing depositional environments interrupted by erosional events.

The project site is entirely underlain by Young alluvial fan deposits (Holocene and latest Pleistocene) (Morton 2004). These are unconsolidated deposits of alluvial fans and headward drainages of fans. Sediment within the project area is identified as silty sand (Morton 2004). These alluvial deposits derive from the Santa Ana River Flood Plain.

Soils within the project area are Metz loamy sand (NRCS 2013). This soils is made up of alluvium derived from mixed sources and occurs on alluvial fans. A typical soil profile includes loamy sand to 17 inches depth and below that stratified sand to fine sandy loam (NRCS 2013).

The climate of the region can generally be described as Mediterranean, with cool wet winters and hot dry summers. Rainfall limits vegetation growth but Coastal Sage Scrub vegetation was probably present within the project in the past before the area was developed for agriculture. The Santa Ana River, located approximately one mile east of the project area would have supplied water to the area.

Past animal resources in the region probably included deer, fox, raccoon, skunk, mountain lion, bobcat, coyote, rabbit, and various rodent, reptile, and bird species. Small game, dominated by rabbits, was probably relatively abundant in the past. The coastline is roughly eight miles southwest and could also have supplied resources to inhabitants of the area.

## **B. Cultural Setting**

### **Paleoindian Period**

The earliest well documented prehistoric sites in southern California are identified as belonging to the Paleoindian period. The Paleoindian period is thought to have occurred between 12,000 years ago, or earlier, and 8,000 years ago in this region. Although varying from the well-defined fluted point complexes such as Clovis, the period is seen as a hunting focused economy with limited use of seed grinding technology. The economy is generally seen to focus on highly ranked resources such as large mammals and relatively high mobility that may be related to following large game. Archaeological evidence associated with this period has been found around inland dry lakes, on old terrace deposits of the California desert, and also near the coast.

### **Archaic or Millingstone Period**

Native Americans during the Archaic period had a generalized economic focus on hunting and gathering. In many parts of North America, Native Americans chose to replace this economy with types based on horticulture and agriculture. Coastal southern California economies remained largely based on wild resource use until European contact (Willey and Phillips 1958).

The Early Archaic period is differentiated from the earlier Paleoindian period by a shift to a more generalized economy and an increased focus on use of grinding and seed processing technology. At sites dated between approximately 8,000 and 1,500 years before present (BP), the increased use of groundstone artifacts and atlatl dart points, along with a mixed core-based tool assemblage, identify a range of adaptations to a more diversified set of plant and animal resources. Variations of the Pinto and Elko series projectile points, large bifaces, manos and portable metates, core tools, and heavy use of marine invertebrates in coastal areas are characteristic of this period, but many coastal sites show limited use of diagnostic atlatl points. Major changes in technology within this relatively long chronological unit appear limited. Several scientists have considered changes in projectile point styles and artifact frequencies within the Early Archaic period to be indicative of population movements or units of cultural change (Moratto 1984) but these units are poorly defined locally due to poor site preservation.

### **Late Prehistoric Period**

Approximately 2,000 years ago, Shoshonean groups are thought to have migrated into southern California. These people spoke a Takic language, a sub-family of the Uto-Aztecan family; the descendants of whom include the Cahuilla, Gabrielino, Luiseño, and Serrano. The Late Prehistoric period in San Bernardino County is recognized archaeologically by smaller projectile points, the replacement of flexed inhumations with cremation, the introduction of ceramics and an emphasis on inland plant food collection and processing, especially acorns. Inland semi-



sedentary villages were established along major water courses, and montane areas were seasonally occupied to exploit acorns and piñon nuts, resulting in permanent milling stations on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed-grinding basins.

### **Gabrielino**

The Native American people who occupied most of the Los Angeles basin and adjacent regions at the time of Spanish contact are referred to as the Gabrielino. This name was given to them by the Spanish in reference to the San Gabriel Mission, one of the two major Spanish missions established in Gabrielino territory (Bean and Smith 1978). The native name for these people and the modern descendants is Tongva.

Although the area occupied by the Gabrielino is considered to have been one of the most environmentally favored in southern California and the Gabrielino are considered to have been one of the wealthiest and most influential cultural groups in the area, much less is known about them because the population was decimated early on (Kroeber 1925). The territory inhabited by the Gabrielino at Spanish contact encompassed Los Angeles County, northern Orange County, and parts of western San Bernardino and Riverside counties. The eastern boundary with the Serrano people was somewhere in the San Bernardino area.

The Gabrielino relied heavily upon the exploitation of wild plant resources (Johnston 1962). Evidence about population size and density is scant. The group possibly had more than 50 or 100 mainland villages with an average population of 50-100 per village (Bean and Smith 1978). These estimates fit in with Kroeber's estimate that in 1770 the population was about 5,000.

Like other Native Californians the Gabrielino wove baskets for many uses, although few baskets authentically assignable to them have been preserved (Kroeber 1925). No pottery was made by the Gabrielino until the mission days (Kroeber 1925:628).

Few details are known with certainty regarding the Gabrielino social and political systems due to early severe disruptions of traditional culture following Spanish contact. It appears that a moiety system similar to nearby groups existed (Bean and Smith 1978). The available data indicate that the Gabrielino were characterized by three hierarchically ordered social classes: an elite that included chiefs, their immediate families, and the very rich; a middle class from fairly well-to-do and long-established lineages; and a third class of everyone else (Bean and Smith 1978).

Villages were usually autonomous, and the dominant lineage's leader was usually the village chief. Sometimes a single chief maintained leadership over several villages, and a chief's authority was legitimized by his possession of the sacred bundle (Bean and Smith 1978).

The Gabrielino are believed to have been highly associated with one of the most popular and widespread religious cults in the southwest. Unfortunately, extremely little ethnohistoric information exists for the Gabrielino on the Jimson-weed or toloache cult, or on Chinigchinich, the important leader responsible for spreading the beliefs and rituals of this religion to other societies (Johnston 1962).

The severe cultural experiences and changes that the Gabrielino experienced during the Mission, Post-Mission, and American periods of history are well-described by Johnston (1962). Like many other native populations of the New World, the Gabrielino proved remarkably susceptible to European diseases, even in advance of direct contact or actual settlement. The seemingly low population estimates based on Spanish mission records probably reflect this early depopulation.

### **Ethnohistoric Period**

The Ethnohistoric period refers to a brief period when Native American culture was initially being affected by Euroamerican culture and historical records on Native American activities were limited. When the Spanish colonists began to settle California, they established missions to incorporate Native Americans into the emerging European society.

By the early 1820s California came under Mexico's rule, and in 1834 the missions were secularized resulting in political imbalance which caused Indian uprisings against the Mexican rancheros. Many Native Americans left the missions and ranchos and returned to their original village settlements.

When California became a sovereign state in 1849, Native Americans were recruited more heavily as laborers and experienced even harsher treatment. Conflicts between Indians and encroaching Anglos finally led to the establishment of reservations for some Indian populations. The reservation system interrupted Native American social organization and settlement patterns, yet many aspects of the original culture still persist today. Certain rituals and religious practices are maintained and traditional games, songs and dances continue as well as the use of foods such as acorns, yucca and wild game.

### **Historic Period**

Cultural activities within Orange County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American control, occupation, and land use. An abbreviated history of the region is presented for the purpose of providing a background on the presence, chronological significance, and historical relationship of cultural resources within the County.

Native American control of the southern California region ended in the political views of western nations with Spanish colonization of the area beginning in 1769. De facto Native American control of the majority of the population of California did not end until several decades later. In southern California, Euroamerican control was firmly established by the end of the Garra uprising in the early 1850s (Phillips 1975).

The Spanish Period (1769-1821) represents a period of Euroamerican exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego, San Gabriel, and San Juan Capistrano Missions. The Mission system used Native Americans to build a footing for greater European settlement. The Mission system also introduced horses, cattle, other agricultural goods and implements; and provided construction methods and new architectural styles. The cultural and institutional systems established by the Spanish continued beyond the year 1821, when California came under Mexican rule.

The Mexican Period (1821-1848) includes the retention of many Spanish institutions and laws. The mission system was secularized in 1834 which dispossessed many Native Americans and increased Mexican settlement. After secularization, large tracts of land were granted to individuals and families and the rancho system was established. Cattle ranching dominated other agricultural activities and the development of the hide and tallow trade with the United States increased during the early part of this period. The Pueblos of Los Angeles and San Diego were established during this period and Native American influence and control greatly declined. The Mexican Period ended when Mexico ceded California to the United States after the Mexican-American War of 1846-48.

Soon after American control was established (1848-present) gold was discovered in California. The tremendous influx of American and Europeans that resulted, quickly drowned out much of the Spanish and Mexican cultural influences and eliminated the last vestiges of de facto Native American control. Few Mexican ranchos remained intact because of land claim disputes and the homestead system increased American settlement beyond the coastal plain.

### **City of Santa Ana History**

In 1810, Jose Antonio Yorba, a sergeant of the Spanish army, was granted land that he called Rancho Santiago de Santa Ana, which comprises much of today's Orange County. The center of Santa Ana is on land obtained from the descendants of Jose Antonio Yorba in 1869 by Kentuckian William H. Spurgeon. The Southern Pacific Railroad built a branch line from Los Angeles to Santa Ana in 1877, and was offered free right of way, land for a depot, and \$10,000 in cash to the railroad in exchange for terminating the line in Santa Ana.

William H. Spurgeon started his town with 24 blocks of land and named it Santa Ana. He spent the rest of his life in active service for what became his city. Santa Ana was incorporated as a city in 1886 with a population of 2,000 and in 1889 became the seat of the newly formed Orange County.

Santa Ana was initially the center of an agricultural area, but rapidly developed into an urban community. During World War II, the Santa Ana Army Air Base was built as a training center for the United States Army Air Forces. The growth of the defense industry created thousands of jobs and accompanied a housing boom in the city and region. In addition to attracting a largely white population, the era also brought the first major wave of Mexican immigrants via the low-wage seasonal Bracero Program, following Mexican immigration patterns in the southwest region. While whites were still the majority in the 1960s. Santa Ana experienced the same white flight to the suburbs by way of racial housing policy patterns that were characteristic of many American cities at the time. The City of Santa Ana expanded over time incorporating surrounding agricultural lands including the project area.

### **C. Prior Research**

As the first step in performing the current investigation, archival research and background studies were conducted including a literature and record search at the local archaeological repository, in addition to examining historic maps and historic site inventories. This information was used to identify previously recorded resources and determine the types of resources that might occur in the survey area.

A records search was conducted at the South Central Coastal Information Center at California State University, Fullerton (Appendix B). The record search indicated that the project area has not been previously surveyed for cultural resources, and that no cultural resources have been recorded within a one mile radius of the project area or within the project. Twenty-eight previous investigations have been conducted within one mile but none on or adjacent to the project area (Table 1). One historic residence is recorded, several blocks to the north (801 N. Mountain View St.).

Historic research included an examination of a variety of resources. The current listings of the National Register of Historic Places were checked through the National Register of Historic Places website. The California Inventory of Historic Resources (State of California 1976) and the California Historical Landmarks (State of California 1992) were also checked for historic resources. No such resources have been recorded in the vicinity of the project area.

The half-block General Plan Amendment area includes at least 11 structures of historic-age (greater than 45 years old). While these structures have not been evaluated individually, they represent a mix of individual, largely post-war (1949-1952), construction and do not appear to represent a potential historic district, due to their lack of theme and association. One structure dating to 1927 and some additional construction in the early 1960s and 1970s is also present.

#### **D. Native American Consultation/Participation**

Federal law and State Guidelines identify Native American consultation and participation as an important aspect of the cultural resource evaluation process. A Sacred Lands Search was requested and a reply received on February 13, 2020. The results of the Sacred Lands Search were negative, although the results do not preclude the presence of cultural resources. Native American correspondence is included as Appendix C.

**Table 1. Cultural Resources Investigations within One Mile of the Project Area**

<b>Author(s)</b>	<b>Report Title</b>	<b>Year</b>
Becker et al.	Cultural Resources Monitoring Report, Orange County Water District Groundwater Replenishment System, Orange County	2007
Billat	Nextel Communications Wireless Telecommunications Service Facility CA-6638a	2000
Bonner	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: CM 094-01, in the City of Santa Ana	1998
Bonner	Cultural Resource Records Search Results and Site Visit for T-Mobile Telecommunications Facility Candidate LA02835 (California Custom Lift) 13812 West Street, Garden Grove, Orange County	2006
Bonner	Cultural Resource Records Search and Site Visit Results for Royal Street Communications, LLC Candidate LA0627B (Santa Anita Park), 125 South Figueroa Street, Santa Ana, Orange County	2006
Bonner	Cultural Resource Records Search and Site Visit Results for T-Mobile Candidate LA03862C (Saint Barbara Church), 5306 McFadden Avenue, Santa Ana	2006
Bonner	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate LA33321C (Rosita Park Lt. Standard), 4600 West Hazard Avenue, Santa Ana	2009
Bonner	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate LA33811-C (Leaning Tower of Newhope), 4440-3/4 McFadden Avenue, Santa Ana	2011
Bonner et al.	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA03862C (St Barbara Church RL) 730 3/4 South Euclid Street, Santa Ana	2014
Brunzell	Cultural Resources Assessment of the First Harbor Project, Santa Ana, Orange County, California (BCR Consulting Project No. TRF1416)	2014
Dice	A Cultural Resources Assessment: The Newhope Street Resurfacing Project, Edinger Avenue to Westminster Avenue, City of Santa Ana	2003
Douglas	Archaeological Assessment of Euclid and Hazard, Garden Grove Property, Garden Grove	1980
Duke	Cultural Resource Assessment for the AT&T Wireless Services Facility Number 188.1	1999
Duke	Cultural Resource Assessment AT&T Wireless Services Facility No. 13045b	2002
Farrar	Section 404 Authorization for the First Street Bridge Replacement Project, City of Santa Ana, Orange County	2010
Fulton and McLean	Cultural Resources Assessment for the Santa Ana West and East Pump Stations Project	2006
Haas et al.	Cultural Resources Study for the 803-815 N Harbor Boulevard Residential Project Santa Ana, Orange County	2013
Langenwaller and Brock	Phase II Archaeological Studies Prado Basin and the Lower Santa Ana River	1985
Leonard and Hall	Description and Evaluation of Cultural Resources within the US Army Corps of Engineers' Santa Ana River Project	1975
Padon	Cultural Resource Review for Groundwater Replenishment System Program EIR/Tier 1/EIS, Orange County Water District and County Sanitation Districts of Orange County	1998
Padon	Archaeological Archival Review and Survey of the Co 5 and Co 6 Flood Control Channels, Anaheim, Newport, and Seal Beach USGS 7.5' Quadrangles, Orange County	1996
Padon	Historic Property Survey Report for Harbor Boulevard Smart Street Improvements, City of Garden Grove, Orange County	2000
Padon et al.	Cultural Resource Assessment for the City of Garden Grove	1995
Perry	Memorandum for Record, Subject: Cultural Resources Survey of the 7.78 Acre Staging Area for Reaches 3 and 4 of the Santa Ana River Project in the City of Santa Ana	1993
Ritchie	Determination of Effect State Route 22/West Orange County Connection	2000
Rogers	Section 106 Consultation for the Santa Ana and Garden Grove Fixed Guideway Corridor Project, Orange County	2011
Salenius	Program EIR/Tier 1 EIS, Groundwater Replenishment System	1998
Strudwick	Archaeological Survey Report for the First Street Bridge Replacement Project Cities of Santa Ana, County of Orange	2010

### **III. RESEARCH DESIGN AND METHODS**

#### **A. Research Design**

The goal of this study was to identify and evaluate any cultural resources within the proposed project alignment and alternatives, so that the potential effects of the project on these resources could be assessed. To accomplish this goal, background information was examined and assessed. Based on the records search and historic map check, the cultural resources that might occur within the project may include both prehistoric and historic resources. Historic structures appear within the project area on early maps and aerials of the area. Prehistoric cultural resources could include temporary camps, and shell and lithic scatters.

#### **B. Survey Methods**

A cultural resource survey of the project area was conducted on March 6, 2020 by Mr. Andrew R. Pignolo. The survey included a surface walk-over of the entire project area in 5 to 10 m interval transects. Overall surface visibility averaged 20 percent with fairly dense vegetation cover.

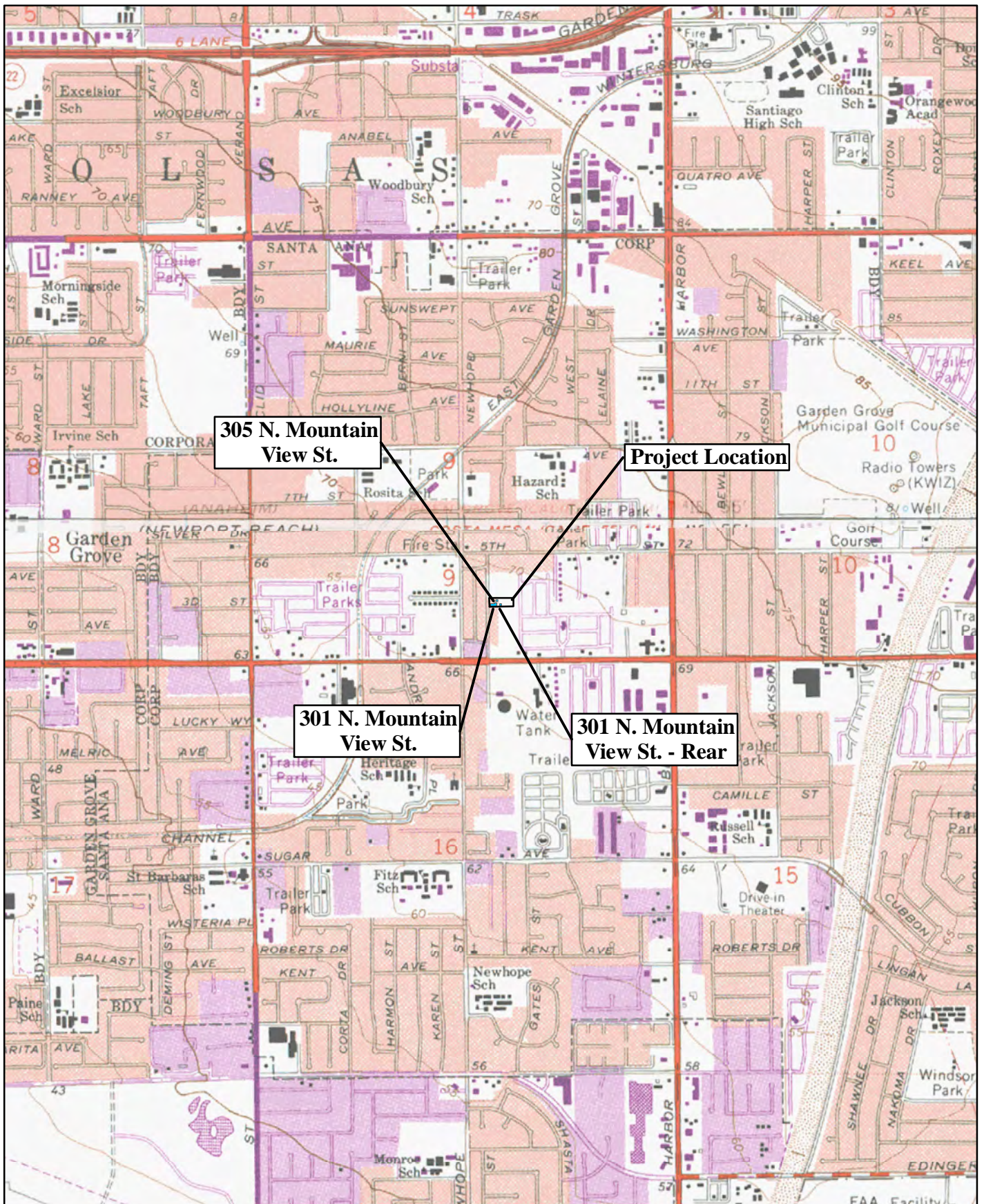
The cultural resources identified during the survey were recorded on a State of California, Department of Parks and Recreation forms (Appendix D). These records were submitted to the SCCIC for official resource numbering designation.

## IV. SURVEY RESULTS

The survey resulted in the location of three historic-age structures on the property (301 North Mountain View Street [NMV-H-1], Rear Structure at 301 North Mountain View Street [NMV-H-2], and 305 North Mountain View Street [NMV-H-3]). These structures represent two residences and a workshop (Figures 4 and 5). The structures are described in detail in Section V of this report.

The remainder of the property included landscape vegetation and weedy non-native herbs and grasses. No prehistoric or historic archaeological resources were identified within the project area during the survey. Open geotechnical soils tests suggested that buried prehistoric cultural material was not present. All structures on the property were built after regular sewer systems and trash pickup were established, so the potential for buried historic-age trash deposits is unlikely.

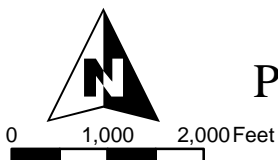




Source: USGS 7.5' Anaheim & Newport Beach Quadrangles

Figure 4

## Project Location and Associated Cultural Resources

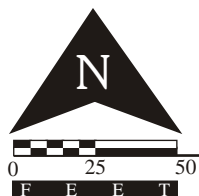






Source: Google Maps 2020

Figure 5  
Structures within the Project Area



## **V. HISTORIC RESOURCE EVALUATION**

### **A. Introduction**

The following discussion provides a description of ownership of the properties in addition to a detailed description of the structures themselves.

### **B. 301 North Mountain View Street (NMV-H-1)**

#### **Description and Age**

The residence at 301 North Mountain View Street is a small Ranch Style structure with an “L” shaped footprint including the attached garage (Figure 6). It was originally built in 1960 (Public Records) and includes a 3 bedroom 2 bathroom house of approximately 1,220 square feet. The 1963 aerial photograph shows a rectangular structure on the property suggesting that the garage is a later addition to the house. The unaddressed structure in the rear of 301 North Mountain View Street is present in the 1963 aerial, suggesting that it may have been the original garage on the property or a workshop. The 1972 aerial photograph appears to show the current attached garage extension, indicating that it was added between 1963 and 1972. The street-front extension of the structure may have also been added at this time.

The building itself is a 41 by 78 ft. wood-frame stucco structure with concrete slab foundation. The residential portion of the structure has a low-angled gable roof with composite shingles. The roofline changes angle slightly reflecting the front extension of the structure. Eave width varies along the margins of the structure with a slightly larger eave forming a narrow entryway porch and a large overhanging eave on the southwest corner of the building. The underside of the eaves is open beam. A decorative concrete block partition below the eave and three decorative metal eave supports help define an entryway porch. Gutters have been added to the eaves on the front of the garage and the porch area.

The garage roof gable is significantly higher than the remainder of the house, again suggesting a different construction date. The garage door is decorative and relatively recent in style. Windows are sliding aluminum-frame and a aluminum frame sliding glass door is also present. Windows and the sliding door have been covered with wrought iron protective bars.

#### **Ownership and Occupation**

The primary ownership of 301 North Mountain View Street seems to have been the Cucovatz family. The 1964 and 1966 voter registration records show James E. Cucovatz living at 301 North Mountain View Street. James E. Cucovatz was born on June 29, 1900. His brother Paul C. Cucovatz and sister-in-law Dena C. Cucovatz are also listed at the same address those same years (California, Voter Registrations, 1900-1968). Paul Charles Cucovatz was born on January 25, 1912 in Italy (U.S. WWII Draft Cards, 1940-1947). Dena Christine Telk Cucovatz was born on May 16, 1910 in Pennsylvania and died on March 13, 1991 (California Death Index, 1940-1997). Dena Telk married Paul Cucovatz on June 19, 1937 in Cuyahoga, Ohio (Ohio, County Marriage Records, 1774-1993). Paul C. Cucovatz divorced Dena in June 1968 (California Divorce Index, 1966-1984). Paul C. Cucovatz was living at 301 N Mountain View Street after 1993 (U.S. Phone and Address Directories, 1993-2002). Paul C. Cucovatz died on February 3, 1998 in Santa Ana (U.S. Social Security Death Index, 1935-2014).





a. House Overview, Looking Southeast (PR-07148-037)



b. House Front, Looking East (PR-07148-005)

Figure 6  
301 North Mountain View Street Structure



## **C. Rear 301 North Mountain View Street (NMV-H-2)**

### **Description and Age**

The rear of 301 North Mountain View Street contains an unaddressed structure (Figure 7). While the main residence at this address was built in 1960 (Public Records), the window and door style of this smaller structure suggest that it may have been older (1950s). This suggests the possibility that the structure is a move-on or it was built of older, salvaged materials. The structure does not appear in the 1953 aerial photograph of the area. The 1963 aerial photograph shows the main house toward the front of the property. The unaddressed structure in the rear of 301 North Mountain View Street is also present in the 1963 aerial.

The structure is a 22 by 24 ft. wood-frame building with plywood siding. The roof is a moderate gable with small metal end vents. Roofing is composite shingle. Windows are double-hung and one window includes a diamond pattern glazing while the others are plain. Other windows are two panel casement windows with wood framing. The door also includes window panels and is 1950s in style. The diversity of window types suggest the possibility that the building was constructed of salvaged materials and does date to 1960. No roof vent pipe is present suggesting there is no plumbing.

Ownership appears to parallel that of 301 North Mountain View Street.

## **D. 305 North Mountain View Street (NMV-H-3)**

### **Description and Age**

County assessor records indicate an initial construction date of 1938 for the house at 305 North Mountain View Street. This date is somewhat inconsistent with the architectural style of the house, which is more consistent with post-war construction. This 24 by 31 ft. house is a Minimal Traditional single-story single-family residence (Figure 8). It is a 1 bedroom, 1 bathroom house of approximately 725 square feet. It appears on aerial photographs as early as 1953. USGS Quadrangle maps jump from only a structure south of the property in 1958 to the area being generally urbanized without individual structures shown in 1968. An absence of a structure at this location on the 1943, 1945, and 1951 USGS quadrangles suggests that the 1938 improvements refer to structures not located on the current parcel. The house is wood-frame with a poured concrete and pile foundation. The front roof is gabled with a moderate pitch and composition shingles. The back rooms have a low angled shed roof. Windows are double-hung sash. An open front porch extension is present on part of the structure with a shed roof. The porch has decorative wood railing with chevron designs. Siding on the house is artificial cedar shingle.

### **Ownership and Occupation**

A public records index covering the years 1950 to 1993 lists Lynne S. Aronson, Cynthia A. Kokoszka, Tuan H. Pham, Eddie Joe Atencia, Jr. and Leonard C. Gillis as occupants. Other past occupants include C. Jacobs and J. Arriaga (Spokeo 2020).





a. Back Building, Looking Southwest (PR-07148-018)



B. Back Building, Looking Southeast (PR-07148-01823)

Figure 7  
Rear 301 North Mountain View Street Structure





a. House Front, Looking East (PR-07148-002)



b. House Side and Back, Looking Southwest (PR-07148-015)

Figure 8  
305 North Mountain View Street Structure





## VI. SUMMARY AND RECOMMENDATIONS

The goal of the project was to identify resources that may be impacted by the proposed Mountain View Street Condominium Project. The cultural resource survey identified three historic-age structures within the project area (NMV-H-1 thru NMV-H-3).

### A. Evaluation Criteria

According to the California Environmental Quality Act (CEQA) (§15064.5a), the term “historical resource” includes the following:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resources as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:
  - (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
  - (B) Is associated with the lives of person important in our past;
  - (C) Embodies the distinctive characteristics of a type, period, region, or individual, or possesses high artistic value; or
  - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined eligible for listing the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in sections 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as:

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
  - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
  - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historical or culturally significant; or
  - (C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- (1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.a of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on



the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 1564.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

- (d) When an initial study identifies the existence of, or the probably likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code SS5097398. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
  - (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
  - (2) The requirement of CEQA and the Coastal Act.

## **B. Resource Importance**

The residential structure at 301 North Mountain View Street (NMV-H-1) was built in 1960 and is recommended to not be historically significant. This resource is not associated with events that have made a significant contribution to the broad patterns of Santa Ana's history and cultural heritage. The residence is not associated with events significant in local history. It is also not associated with the lives of persons important to the history of Orange County or its communities. The architect and builder are unknown, but the structure does not embody the distinctive characteristics of a type, period, Orange County region, or method of construction, or represent the work of an important creative individual, or possess high artistic value. The integrity of the structure has been compromised by two significant additions between 1953 and 1972 and other minor improvements that have significantly modified the original architectural style. The structure cannot yield information important in local history.

The rear structure at 301 North Mountain View Street (NMV-H-2) appears to have been built in the 1960s, but its exact age is unknown. It is recommended to not be historically significant. This resource is not associated with events that have made a significant contribution to the broad patterns of Santa Ana's history and cultural heritage. The structure is not associated with events significant in local history. It is also not associated with the lives of persons important to the history of Orange County or its communities. The architect and builder are unknown, but the structure does not embody the distinctive characteristics of a type, period, Orange County region, or method of construction, or represent the work of an important creative individual, or possess high artistic value. The integrity of the structure is uncertain, as it may be constructed of salvaged materials. The structure cannot yield information important in local history.

The residential structure at 305 North Mountain View Street (NMV-H-3) has a permit date of 1938, but appears to have been built in the late 1940s or early 1950s. It is recommended to not be historically significant. This resource is not associated with events that have made a significant contribution to the broad patterns of Santa Ana's history and cultural heritage. The residence is not associated with events significant in local history. It is also not associated with the lives of persons important to the history of Orange County or its communities. The architect and builder are unknown, but the structure does not embody the distinctive characteristics of a type, period, Orange County region, or method of construction, or represent the work of an important creative individual, or possess high artistic value. The integrity of the structure appears largely intact. The structure cannot yield information important in local history.

### **C. Impacts and Mitigation**

Structures NMV-H-1, NMV-H-2, and NMV-H-3 do not qualify as significant under the California Register of Historical Resources (California Register) Guidelines used for CEQA review because of their lack of integrity and/or because they lack other criteria significance criteria for eligibility to the California Register. Significant impacts to cultural resources will not result from this project.

## VII. REFERENCES

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 1958 *Method and Theory in American Archaeology*. University of Chicago Press.

## **APPENDICES**

- A. Resume of Principal Investigator
- B. Record Search Confirmation
- C. Native American Consultation Correspondence
- D. Cultural Resource Forms

**APPENDIX A**

**RESUME OF PRINCIPAL INVESTIGATOR**

**ANDREW R. PIGNIOLO, M.A., RPA**  
**Principal Archaeologist**  
**Laguna Mountain Environmental, Inc.**

**Education**

San Diego State University, Master of Arts, Anthropology, 1992  
San Diego State University, Bachelor of Arts, Anthropology, 1985

**Professional Experience**

2002-Present	Principal Archaeologist/President, Laguna Mountain Environmental, Inc., San Diego
1997-2002	Senior Archaeologist, Tierra Environmental Services, San Diego
1994-1997	Senior Archaeologist, KEA Environmental, Inc., San Diego
1985-1994	Project Archaeologist/Senior Archaeologist, Ogden Environmental and Energy Services, San Diego
1982-1985	Reports Archivist, Cultural Resource Management Center (now the South Coastal Information Center), San Diego State University
1980-1985	Archaeological Consultant, San Diego, California

**Professional Affiliations**

Register of Professional Archaeologists (RPA), 1992-present  
Qualified Archaeology Consultant, San Diego County  
Qualified Archaeology Consultant, City of San Diego  
Qualified Archaeology Consultant, City of Chula Vista  
Qualified Archaeology Consultant, Riverside County  
Society for American Archaeology  
Society for California Archaeology  
Pacific Coast Archaeological Society  
San Diego County Archaeological Society

**Qualifications**

Mr. Andrew Pignuolo is a certified archaeology consultant for the County and City of San Diego. Mr. Pignuolo has more than 38 years of experience as an archaeologist, and has conducted more than 800 projects throughout southern California and western Arizona. His archaeological investigations have been conducted for a wide variety of development and resource management projects including water resource facilities, energy utilities, commercial and residential developments, military installations, transportation projects, and projects involving Indian Reservation lands. Mr. Pignuolo has conducted the complete range of technical studies including archaeological overviews and management plans, ethnographic studies, archaeological surveys, test excavations, historical research, evaluations of significance under CEQA and Section 106, data recovery programs, and monitoring projects. He has received 40 hour HAZWOPPER training and holds an active card for hazardous material work.

## REPRESENTATIVE PROJECTS

**Proposed SDG&E Sunrise Powerlink Project, San Diego to Imperial Valley, California** (*San Diego Gas and Electric*). Mr. Pigniolo served as the Principal Investigator and archaeological monitor for this project whose purpose is the installation of a new transmission line corridor running from San Diego to Imperial Valley. This phase of the project included the preliminary reporting of any cultural resources observed during field visits to the proposed impact areas. Mr. Pigniolo recorded sites encountered during monitoring, and collected GPS points and photographs of the sites for future review. Mr. Pigniolo also conducted the cultural resources portion of the environmental training for this project.

**Princess Street Monitoring and Data Recovery Project at the Spindrift Site** (*City of San Diego*). Mr. Pigniolo served as a Principal Investigator of an archaeological monitoring and data recovery program at the Spindrift Site in the community of La Jolla. The effort was initially to provide archaeological monitoring of a utility undergrounding project. The presence of the major prehistoric village site within the project alignment quickly became evident prior to construction monitoring and a data recovery plan was prepared prior to the start of work. Data recovery included the excavation of 25 controlled units and the water screening of 100 percent of the archaeological site material impacted during trenching. More than 40 fragmented human burials were encountered. Working with Native American monitors and representatives, the remains were repatriated.

**Cultural Resource Survey, Geotechnical Monitoring, and Testing for the La Jolla View Reservoir Project, La Jolla, City of San Diego, California** (*IEC*). Mr. Pigniolo served as Principal Investigator and conducted an archaeological survey on an approximately 15-acre study area, in the La Jolla Natural Park area on Mount Soledad above La. In addition to the field survey, geotechnical work was monitored by an archaeologist and Native American monitor. One small prehistoric cobble procurement site (CA-SDI-20843) was tested to determine site significance. Due to surface visibility constraints from dense vegetation, monitoring by an archaeological and a Native American monitor during construction excavation and grading was recommended to ensure sensitive features not identified during the survey are not present or impacted by the project.

**City of San Diego Sever Group 783 Project, San Diego, California** (*Orion Construction Company*.) Mr. Pigniolo was the Principal Investigator for an archaeological monitoring project for a sewer line replacement in the eastern portion of the City of San Diego. The project included archaeological construction monitoring in an urban environment.

**Cultural Resource Monitoring and Treatment of CA-SDI-20861 for the 1941-1945 Columbia Street Project, City of San Diego, California** (*Jeff Svitak Inc.*) Mr. Pigniolo served as Principal Investigator of an archival research and an archaeological and Native American monitoring program of building demolition and construction excavation for a multi-family dwelling in the Little Italy community of the City of San Diego. The project consisted of archaeological and historical research prior to fieldwork, archaeological monitoring of foundation removal and construction excavation, and the recovery and analysis of historic artifacts discovered during monitoring. Site CA-SDI-20861 was treated as a significant cultural resource and the recovery and analysis of the cultural material served as mitigation for the project impacts to the site.

**Cultural Resource Salvage and Monitoring within a Portion of CA-SDI-39/17372 at 1891 Viking Way, La Jolla, City of San Diego, California** (*Ayers General Contracting, Inc.*)

Mr. Pignuolo served as Principal Investigator of an archaeological salvage and documentation program in addition to construction monitoring for the residence located at 1891 Viking Way, in the La Jolla. The project included the demolition and replacement of an existing retaining wall, and the replacement of additional yard hardscape. The City of San Diego archaeologist determined that construction work was occurring within site CA-SDI-39 and required work to stop and a treatment plan to partially mitigate impacts to the site be prepared. The project included a salvage effort to partially mitigate impacts to this portion of the site, through documentation and artifact recovery and to recover any impacted human remains as part of mitigation. Three phases of treatment were conducted including a 100 percent recovery program for human remains and associated grave goods and monitoring of final construction disturbance and backfilling.

**Muller Residence Archaeological Survey, Testing, and Evaluation, Carmel Valley, City of San Diego, California** (*Mr. Rolf Muller*) Mr. Pignuolo served as Principal Investigator and Project Manager of a cultural resource survey and testing and evaluation program of a residential parcel proposed for development. The survey indicated the presence of a portion of a prehistoric shell midden within the project area. The testing program indicated a deeply buried archaeological deposit with a high level of integrity. Impact avoidance through redesign was recommended under City of San Diego Historical Resources Guidelines.

**Cultural Resource Monitoring for The San Diego County Administration Center Waterfront Park Project, San Diego, California** (*McCarthy Building Companies, Inc.*)

Mr. Pignuolo served as Principal Investigator of a cultural resource monitoring program for the Water Front Park Project at the San Diego County Administration Building in the City of San Diego. The monitoring program included excavation near the dredge fill/native ground contact. Historic maps indicated that the entire project area was located on man-made land created from bay dredge spoils. The monitoring program identified a small historic-age boat that probably sank in the bayfront prior to filling of the area. Based on the current County guidelines, this resource qualifies as significant for its information potential and has been treated as such. The boat was documented and avoided, and left in place.

**13<sup>th</sup> and C Streets Evaluation Project, City of San Diego, California** (*WM Builders*) Mr. Pignuolo served as Principal Investigator of a archaeological/historical resource assessment for a commercial development project in the City of San Diego. The project area is in the downtown portion of San Diego. A records search, literature review, examination of historic maps, records, and city directories was used to assess the potential for buried historic resources within the project area. Potential buried historic resource locations were identified and a testing plan was developed.

**U. S. Army Yuma Proving Ground (YPG) Native American Consultation Plan, Yuma, Arizona** (*Yuma Proving Ground*). Mr. Pignuolo served as principal author of a Native American consultation plan for YPG to provide guidance and information to U.S. Army commanders and Army resource managers at YPG for consultation with Native American groups. Consultation was conducted in a manner that is consistent with federal laws and regulations that mandate consultation and the consultation plan was designed to ensure the participation of Native American groups early in the planning process.



**All American 105 Race Project, West Mesa, Imperial County, California** (*Legacy 106, Inc.*).

Mr. Pignolo served as Principal Investigator, report author, and crew chief for an archaeological survey for a proposed off-road vehicle race course in the West Mesa area of Imperial County. The survey covered Bureau of Land Management (BLM) lands and included close coordination with BLM staff. The survey included a proposed 7.5 mile course with a very short time-frame. The goal was project alignment adjustment and realignment to avoid resource impacts where possible. A variety of prehistoric cultural resources including 10 sites and seven isolates were encountered. Human remains were identified and avoided. The race route was realigned to avoid significant resource impacts allowing the race to proceed on schedule.

**Alpine Fire Safe Council Brush Management Monitoring Project, Alpine Region, San Diego County, California** (*Alpine Fire Safe Council*)

Mr. Pignolo served as Principal Investigator for a cultural resources monitoring and protection program on four project areas surrounding Alpine. Cultural resources identified during previous surveys within the vegetation treatment areas were flagged for avoidance. The project included hand clearing and chaparral mastication near residential structures to create a fire buffer zone. Vegetation removal was monitored to ensure cultural resources obscured by heavy vegetation were not impacted by the project and that all recorded cultural resources were avoided. The Bureau of Land Management served as Lead Agency for the project.

**APPENDIX B**

**RECORD SEARCH CONFIRMATION**

**From:** Kott, Isabela <ikott@Fullerton.edu>

**To:** Andrew@LagunaEnv.com <Andrew@LagunaEnv.com>

**Cc:** South Central Coastal Information Center <scsic@fullerton.edu>

**Subject:** Record Search Results for Mountain View Condo Survey (Proj #2003) – 21177

**Date:** Wed, Apr 1, 2020 5:22 pm

---

Good Evening Andrew,

I have uploaded your record search results for the Mountain View Condo Survey (Proj #2003) – 21177 to Dropbox. The file can be unzipped with the password 73knG9t!B3 using the free program 7-zip. The file will be deleted within 24 hours so please download your results and save them to your desktop. If you have any questions or have trouble accessing your file please let me know.

Best,

Isabela Kott

GIS Technician

South Central Coastal Information Center (SCCIC)

CSUF, Dept. of Anthropology, MH 426

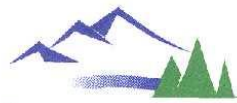
800 N State College Blvd

Fullerton, CA 92834-6846

Phone 657-278-5395

**APPENDIX C**

**NATIVE AMERICAN CONSULTATION CORRESPONDENCE**



## Laguna Mountain Environmental, Inc.

January 29, 2020

Native American Heritage Commission  
1550 Harbor Blvd, Suite 100  
West Sacramento, CA 95691

**Subject: 301 & 305 Mountain View Condo Project Survey (Santa Ana), California (#2003)**

Dear Chairperson,

Laguna Mountain Environmental is conducting an archaeological survey in the western portion of the City of Santa Ana in Orange County between the 405 and 5 freeways. The project involves the demolition of two existing residences to construct eight condominiums.

The project area is approximately 0.742 acres, located west of the Santa Ana River and south of State Route 22, north of West 1<sup>st</sup> Street, south of West 5<sup>th</sup> Street, on the east side of Mountain View Street. The project area is shown on the Newport Beach 7.5' USGS quadrangle, in Section 9 of Township 5 South, Range 10 West (see attached figure).

We respectfully request any information and input that you may have regarding Native American concerns either directly or indirectly associated with this project area. We would also appreciate a current list of appropriate Native American contacts for the area in order to elicit local concerns. If you or your files have any information about cultural resources or traditional cultural properties located on or near the project site, please contact me. If I can provide any additional information, please contact me immediately at (858) 505-8164. Thank you for your assistance.

Sincerely,

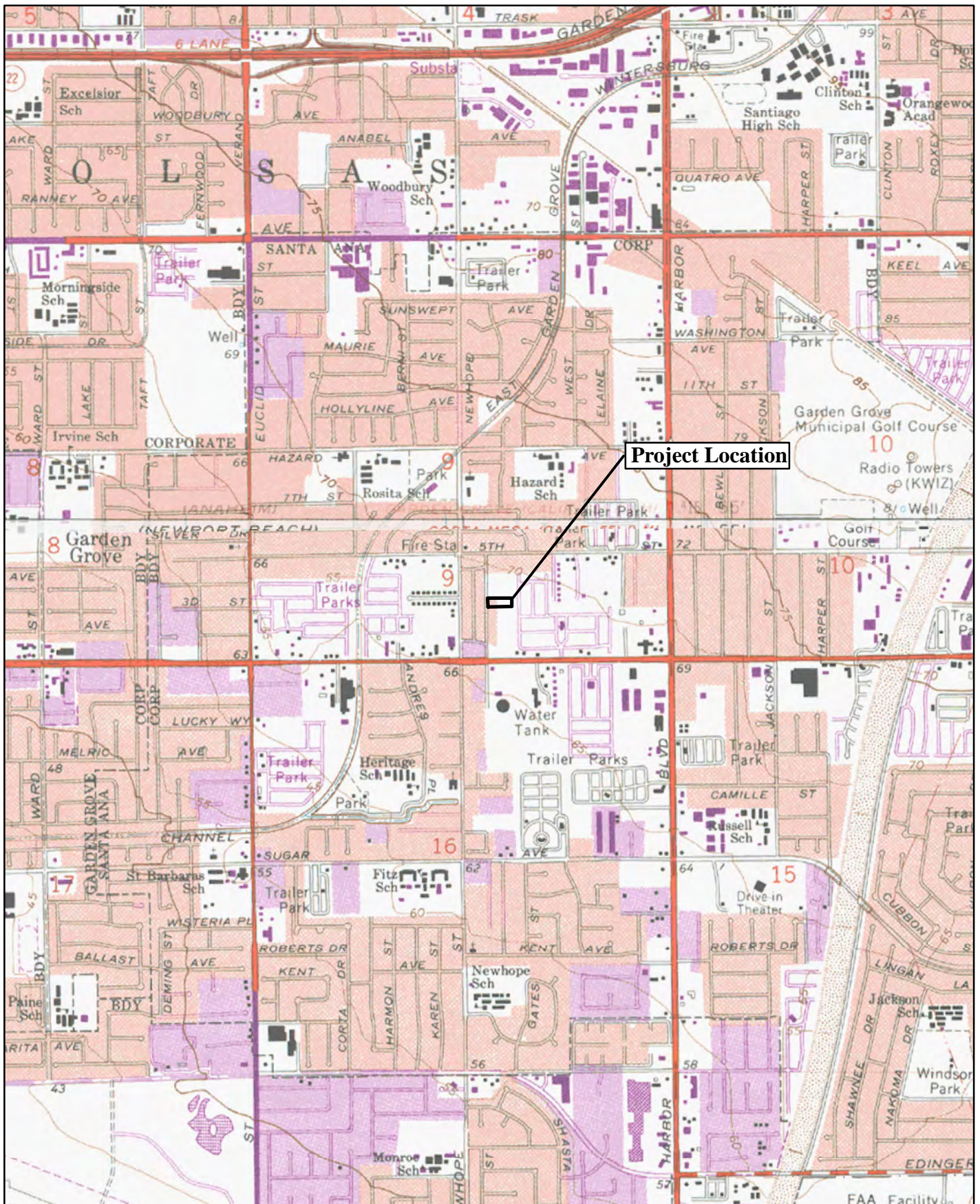
Andrew Pignolo, M.A., RPA  
Principal Archaeologist

Attachments:

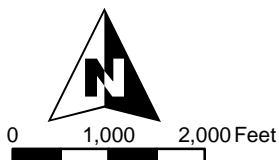
Project Location map

Sacred Lands File & Native American Contacts List Request Form





Source: USGS 7.5' Newport Beach Quadrangle



Project Location



## Sacred Lands File & Native American Contacts List Request

### NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364  
Sacramento, CA 95814  
(916) 653-4082  
(916) 657-5390 – Fax  
nahc@pacbell.net

*Information below is Required for a Sacred Lands File Search*

Project: 301 & 305 Mountain View Condo Project Survey

County: Orange

USGS Quadrangle (7.5') Name: Newport Beach

Township 5S Range 10W Section(s) 9

Company/Firm/Agency: Laguna Mountain Environmental, Inc.

Contact Person: Andrew Pignolo

Street Address: 7969 Engineer Road, Suite 208

City: San Diego Zip: 92111

Phone: 858.505.8164

Email: Laguna@lagunaenv.com

#### Project Description:

The project involves the demolition of two existing residences to construct eight condominiums on less than one acre.





## NATIVE AMERICAN HERITAGE COMMISSION

February 13, 2020

Andrew Pignolo  
Laguna Mountain Environmental

Via Email to: [laguna@lagunaenv.com](mailto:laguna@lagunaenv.com)

**Re: 301 & 305 Mountain View Condo Project, Orange County**

Dear Mr. Pignolo:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: [steven.quinn@nahc.ca.gov](mailto:steven.quinn@nahc.ca.gov).

Sincerely,

Steven Quinn  
Cultural Resources Analyst

Attachment

CHAIRPERSON  
**Laura Miranda**  
Luiseño

VICE CHAIRPERSON  
**Reginald Pagaling**  
Chumash

SECRETARY  
**Merri Lopez-Keifer**  
Luiseño

PARLIAMENTARIAN  
**Russell Attebery**  
Karuk

COMMISSIONER  
**Marshall McKay**  
Wintun

COMMISSIONER  
**William Mungary**  
Paiute/White Mountain  
Apache

COMMISSIONER  
**Joseph Myers**  
Pomo

COMMISSIONER  
**Julie Tumamait-Stenslie**  
Chumash

COMMISSIONER  
**[Vacant]**

EXECUTIVE SECRETARY  
**Christina Snider**  
Pomo

**NAHC HEADQUARTERS**  
1550 Harbor Boulevard  
Suite 100  
West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)



**Native American Heritage Commission  
Native American Contact List  
Orange County  
2/13/2020**

***Gabrieleno Band of Mission  
Indians - Kizh Nation***

Andrew Salas, Chairperson  
P.O. Box 393  
Covina, CA, 91723  
Phone: (626) 926 - 4131  
admin@gabrielenoindians.org

Gabrieleno

***Gabrieleno/Tongva San Gabriel  
Band of Mission Indians***

Anthony Morales, Chairperson  
P.O. Box 693  
San Gabriel, CA, 91778  
Phone: (626) 483 - 3564  
Fax: (626) 286-1262  
GTTribalcouncil@aol.com

Gabrieleno

***Gabrielino /Tongva Nation***

Sandonne Goad, Chairperson  
106 1/2 Judge John Aiso St.,  
#231  
Los Angeles, CA, 90012  
Phone: (951) 807 - 0479  
sgoad@gabrielino-tongva.com

Gabrielino

***Gabrielino Tongva Indians of  
California Tribal Council***

Robert Dorame, Chairperson  
P.O. Box 490  
Bellflower, CA, 90707  
Phone: (562) 761 - 6417  
Fax: (562) 761-6417  
gtongva@gmail.com

Gabrielino

***Gabrielino-Tongva Tribe***

Charles Alvarez,  
23454 Vanowen Street  
West Hills, CA, 91307  
Phone: (310) 403 - 6048  
roadkingcharles@aol.com

Gabrielino

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 301 & 305 Mountain View Condo Project, Orange County.

**APPENDIX D**

**CULTURAL RESOURCE FORMS**

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #  
HRI #  
Trinomial  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 2

Resource Name or #: NMV-H-1

**P1. Other Identifier:**

**P2. Location:** ☐ Not for Publication ☒ Unrestricted

a. County: Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad: Newport Beach Date: 1965 (Revised 1981)

T 5S; R 10W; Section 9; S.B.B.M.

c. Address: 301 N. Mountain View St. City: Santa Ana Zip: 92703

d. UTM: Zone: 11, NAD 83; 414097 mE/ 3734495 mN (GIS)

e. Other Locational Data: The 0.74-acre Mountain View Condo housing development project is located NE of I-5, south of SR-22, and west of the Santa Ana River. The house structure is north of Bolsa Ave. and south of Hazard Ave. (APN 100-28-105-00) at an approximate elevation of 68 ft.

**P3a. Description:** The residence is a small 41 by 78 ft. Ranch Style structure with an "L" shaped footprint, including the attached garage, originally built in 1960 that includes 3 bedrooms and 2 bathrooms in approximately 1,220 sq. ft. A 1963 aerial photograph shows a small rectangular structure in the rear of the property (NMV-H-2) suggesting that the attached garage at the back of the house is a later addition to the house. The building is a wood-frame stucco structure with concrete slab foundation. The residential portion of the structure has a low-angled gable roof with composite shingles. The roofline changes angle slightly reflecting the front extension of the structure. Eave width varies along the margins of the structure with a slightly larger eave forming a narrow entryway porch and a large overhanging eave on the southwest corner of the building. The underside of the eaves is open beam. A decorative concrete block partition below the eave and three decorative metal eave supports help define an entryway porch. The garage roof gable is significantly higher than the remainder of the house, again suggesting a different construction date. The garage door is decorative and relatively recent in style. Windows are sliding aluminum-frame and an aluminum frame sliding glass door is also present.

The primary ownership of 301 North Mountain View Street seems to have been the Cucovatz family. The 1964 and 1966 voter registration records show James E. Cucovatz living at 301 North Mountain View Street. James E. Cucovatz was born on June 29, 1900. His brother Paul C. Cucovatz and sister-in-law Dena C. Cucovatz are also listed at the same address those same years. Paul Charles Cucovatz was born on January 25, 1912 in Italy. Dena Christine Telk Cucovatz was born on May 16, 1910 in Pennsylvania and died on March 13, 1991. Dena Telk married Paul Cucovatz on June 19, 1937 in Cuyahoga, Ohio. Paul C. Cucovatz divorced Dena in June 1968. Paul C. Cucovatz was living at 301 N Mountain View Street after 1993. Paul C. Cucovatz died on February 3, 1998 in Santa Ana.

The structure does not qualify as significant under the California Register of Historical Resources Guidelines used for CEQA review because of the lack of integrity and/or because it lacks other criteria significance criteria for eligibility to the California Register.

**P3b. Resource Attributes:** Single Family Property; HP 2

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



P5b. Description of Photo: View of house, looking SE; 3/6/20; PR-07148-037

**P6. Date Constructed/Age and Sources:**

☒ Historic (1960)

**P7. Owner and Address:**

Unknown

**P8. Recorded by:**

Andrew Pignolo  
Laguna Mountain Environmental, Inc.  
7969 Engineer Rd, Suite 208  
San Diego, CA 92111

**P9. Date Recorded:** 3/6/2020

**P10. Survey Type:** Pedestrian & Hist. Eval.

**P11. Report Citation:** Andrew Pignolo. 2020. *Archaeological Survey and Historic Evaluation Report for the General Plan Amendment at 301 & 305 North Mountain View Street, City of Santa Ana, California* (DP-2018-22). Prepared for Infrastructure Engineering Corporation, Irvine, CA.

**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):



## LOCATION MAP

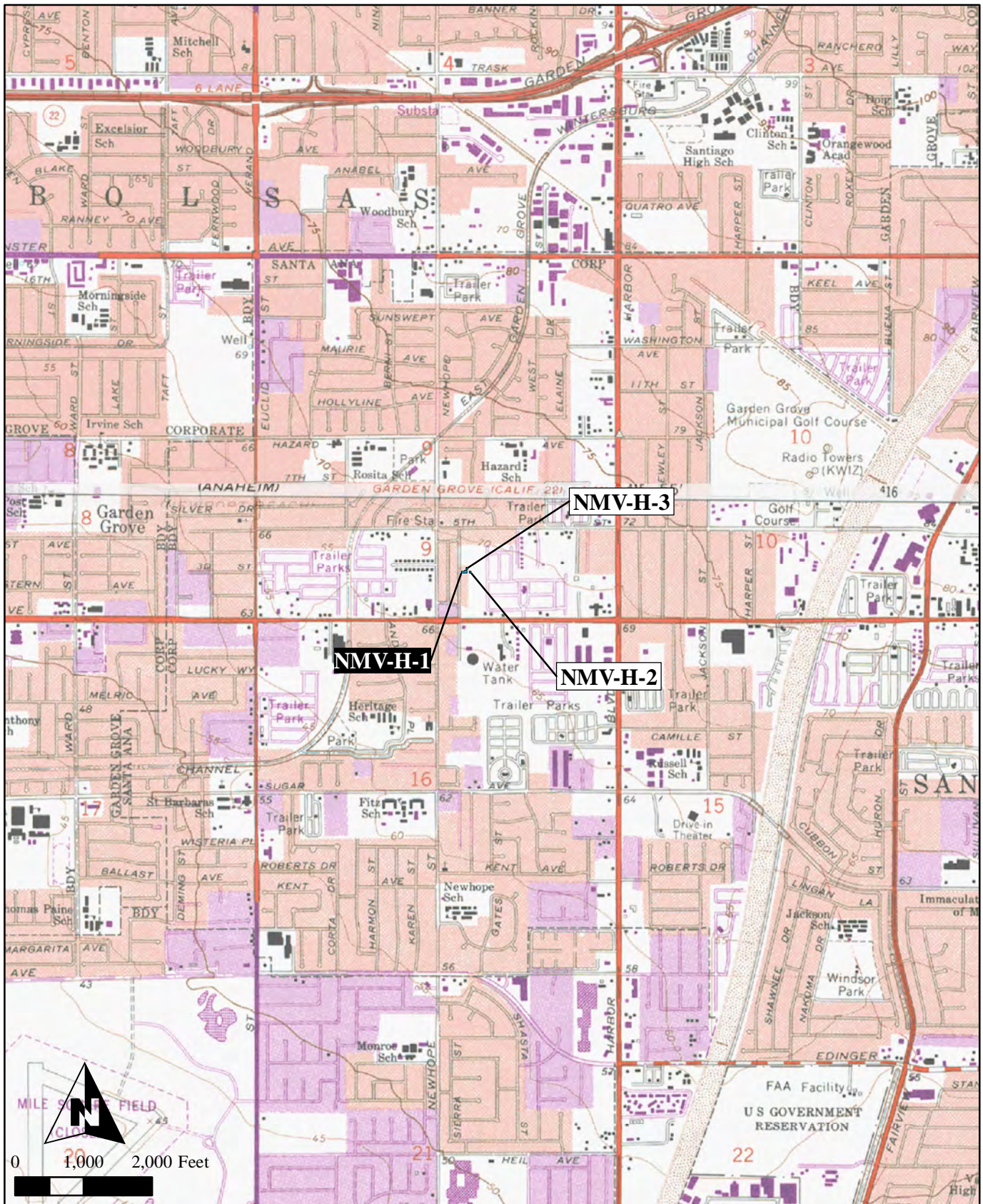
Page 2 of 2

Resource Name or #: NMV-H-1

Map Name: Newport Beach & Anaheim Quadrangles

Scale: 1:24,000

Date of Map: 1965 (1981)





State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #  
HRI #  
Trinomial  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 2

Resource Name or #: NMV-H-2

**P1. Other Identifier:**

**P2. Location:** ☐ Not for Publication ☒ Unrestricted

a. County: Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad: Newport Beach Date: 1965 (Revised 1981)

T 5S; R 10W; Section 9; S.B.B.M.

c. Address: 301 N. Mountain View St. - Rear City: Santa Ana Zip: 92703

d. UTM: Zone: 11, NAD 83; 414124 mE/ 3734496 mN (GIS)

e. Other Locational Data: The 0.74-acre Mountain View Condo housing development project is located NE of I-5, south of SR-22, and west of the Santa Ana River. This garage or workshop structure is north of Bolsa Ave. and south of Hazard Ave. (APN 100-28-105-00) at an approximate elevation of 68 ft.

**P3a. Description:** An unaddressed structure exists at the rear of 301 N. Mountain View St. While the main residence at this address was built in 1960, the window and door style of this structure suggest that it may have been made in the 1950s. This suggests the possibility that the structure is a move-on or it was built of older, salvaged materials. The structure does not appear in the 1953 aerial photograph of the area, however. The 1963 aerial photograph does show both the main house and this smaller structure in the rear. Without a large door opening, the building would seem to be a workshop rather than a place to garage a car. The structure is a 22 by 24 ft. wood-frame building with plywood siding. The roof is a moderate gable with small metal end vents. Roofing is composite shingle. Windows are double-hung and one window includes a diamond pattern glazing while the others are plain. Other windows are two-panel casement windows with wood framing. The door also includes window panels and is 1950s in style. The diversity of window types suggest the other possibility, that the building was constructed of salvaged materials and would date it to 1960. No roof vent pipe is present suggesting there is no plumbing. Ownership appears to parallel that of the house at 301 N. Mountain View St., owned by the the Cucovatz family at least into the 1990s.

The structure does not qualify as significant under the California Register of Historical Resources Guidelines used for CEQA review because of the lack of integrity and/or because it lacks other criteria significance criteria for eligibility to the California Register.

**P3b. Resource Attributes:** Ancillary building; HP 4

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



P5b. Description of Photo: View of building, looking SE; 3/6/20; PR-07148-018

**P6. Date Constructed/Age and Sources:**  
☒ Historic (1950-1960)

**P7. Owner and Address:**  
Unknown

**P8. Recorded by:**  
Andrew Pignolo  
Laguna Mountain Environmental, Inc.  
7969 Engineer Rd, Suite 208  
San Diego, CA 92111

**P9. Date Recorded:** 3/6/2020

**P10. Survey Type:** Pedestrian & Hist. Eval.

**P11. Report Citation:** Andrew Pignolo. 2020. *Archaeological Survey and Historic Evaluation Report for the General Plan Amendment at 301 & 305 North Mountain View Street, City of Santa Ana, California* (DP-2018-22). Prepared for Infrastructure Engineering Corporation, Irvine, CA.

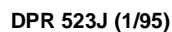
**Attachments:** ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):



**Resource Name or #: NMV-H-2**

**Map Name:** Newport Beach & Anahim Quadrangles

**Date of Map:** 1965 (1981)





State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #  
HRI #  
Trinomial  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 2

Resource Name or #: NMV-H-3

**P1. Other Identifier:**

**P2. Location:** ☐ Not for Publication ☒ Unrestricted

a. County: Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad: Newport Beach Date: 1965 (Revised 1981)

T 5S; R 10W; Section 9; S.B.B.M.

c. Address: 305 N. Mountain View St. City: Santa Ana Zip: 92703

d. UTM: Zone: 11, NAD 83; 414109 mE/ 3734511 mN (GIS)

e. Other Locational Data: The 0.74-acre Mountain View Condo housing development project is located NE of I-5, south of SR-22, and west of the Santa Ana River. The house structure is north of Bolsa Ave. and south of Hazard Ave. (APN 100-28-105-00) at an approximate elevation of 68 ft. It is the smaller house, north of 301 N. Mt. View St. on the same parcel.

**P3a. Description:** While County assessor records list a construction date of 1938 this date seems inconsistent with the architectural style of the house, which is more consistent with post-war construction. The house is a 725 sq. ft. Minimal Traditional single-story single-family residence that includes 1 bedroom and 1 bathroom. The house appears on aerial photographs as early as 1953 and is absent on 1943, 1945, and 1951 USGS quadrangles, indicating that the 1938 Co. records are not for a structure located on the current parcel.

The 24 by 31 ft. house is wood-frame with a poured concrete and pile foundation. The front roof is gabled with a moderate pitch and composition shingles. The back rooms have a low angled shed roof. Windows are double-hung sash. An open front porch extension is present on part of the structure with a shed roof. The porch has decorative wood railing with chevron designs. Siding on the house is artificial cedar shingle.

A public records index covering the years 1950 to 1993 lists Lynne S. Aronson, Cynthia A. Kokoszka, Tuan H. Pham, Eddie Joe Atencia, Jr. and Leonard C. Gillis as occupants. Other past occupants include C. Jacobs and J. Arriaga.

The structure does not qualify as significant under the California Register of Historical Resources Guidelines used for CEQA review because of the lack of integrity and/or because it lacks other criteria significance criteria for eligibility to the California Register.

**P3b. Resource Attributes:** Single Family Property; HP 2

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



P5b. Description of Photo: Front of house, looking east; 3/6/20; PR-07148-002

**P6. Date Constructed/Age and Sources:**

☒ Historic (1960)

**P7. Owner and Address:**

Unknown

**P8. Recorded by:**

Andrew Pignolo  
Laguna Mountain Environmental, Inc.  
7969 Engineer Rd, Suite 208  
San Diego, CA 92111

**P9. Date Recorded:** 3/6/2020

**P10. Survey Type:** Pedestrian & Hist. Eval.

**P11. Report Citation:** Andrew Pignolo. 2020. *Archaeological Survey and Historic Evaluation Report for the General Plan Amendment at 301 & 305 North Mountain View Street, City of Santa Ana, California* (DP-2018-22). Prepared for Infrastructure Engineering Corporation, Irvine, CA..

**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):



**Resource Name or #: NMV-H-3**

**Date of Map:** 1965 (1981)





## Appendix C:

# Geology and Soils

July 25, 2019

W.O. 288219

DMS Consultants, Inc.  
12377 Lewis Street #101  
Garden Grove, CA 92840

Subject: Preliminary Geotechnical Investigation for  
Proposed 8-Unit Apartments, 305 N.  
Mountain View, Santa Ana, California.

Dear Mr. Dewan:

Pursuant to your request, a geotechnical investigation has been performed at the subject site. The purposes of the investigation were to determine the general engineering characteristics of the soils on and underlying the site and to provide recommendations for the design of foundations and underground improvements.

## **PROPOSED DEVELOPMENT**

It is our understanding that the proposed development will consist of demolition of the existing single-story wood-frame house and construction of 6 townhomes. Structural loads are unknown at this time but are anticipated on the order of 2 kips per lineal foot for wall loads and 30 kips column loads.

## **PURPOSE AND SCOPE OF SERVICES**

The scope of the study was to obtain subsurface information within the project site area and to provide recommendations pertaining to the proposed development and included the following:

1. A cursory reconnaissance of the site and surrounding areas.
2. Excavation of three exploratory borings by auger drill to determine the subsurface soil, groundwater conditions and infiltration testing.

3. Collection of representative bulk and/or undisturbed soil samples for laboratory analysis.
4. Laboratory analyses of soil samples including determination of in-situ and maximum density, in-situ and optimum moisture content, shear strength and consolidation characteristics, expansion potential, sulfate content, and liquefaction evaluation.
5. Preparation of this report presenting results of our investigation and recommendations for the proposed development.

## **SITE CONDITIONS**

The subject site is located at 305 N. Mountain View Street, Santa Ana, California. The site is located on the attached Site Vicinity Map, Plate 1.

The site is an essentially level rectangular lot with approximately 108 feet of frontage on the east side of Mountain View Street. Currently, one single-family residences, garage and fruit trees occupy the property.

Site conditions are shown on the Site Plan, Plate 2.

## **FIELD INVESTIGATION**

The field investigation was performed on July 22, 2019 consisting of excavation of three exploratory auger borings at the locations shown on the attached Site Plan, Plate 2. As drilling progressed, personnel from this office visually classified the soils encountered, collected data, and secured representative samples for laboratory testing.

Description of the soils encountered is presented on the attached Boring Log, Plates 3A, 3B and 3C. The data presented on this log is a simplification of actual subsurface conditions encountered and applies only at the specific boring location and the date excavated. It is not warranted to be representative of subsurface conditions at other locations and times.

## **EARTH MATERIALS**

A representative from STRATA-TECH, INC visually logged earth materials encountered within the exploratory test borings. The materials were classified as artificial fill and native soils.

The artificial fills as encountered in the borings were about 1 to 1.5 feet in depth consisting of ft gray fn-med Sand.

Native soils consisted of clean, very fine-med Sand to the maximum depth explored. Earth materials are further described on the attached boring logs, Plates 3A, 3B, and 3C.

## **SEISMICITY**

Southern California is located in an active seismic region. Moderate to strong earthquakes can occur on numerous faults. The United States Geological Survey, California Division of Mines and Geology, private consultants, and universities have been studying earthquakes in Southern California for several decades. Early studies were directed toward earthquake prediction estimation of the effects of strong ground shaking. Studies indicate that earthquake prediction is not practical and not sufficiently accurate to benefit the general public. Governmental agencies are shifting their focus to earthquake resistant structures as opposed to prediction. The purpose of the code seismic design parameters is to prevent collapse during strong ground shaking. Cosmetic damage should be expected.

The principal seismic hazard to the subject property and proposed project is strong ground shaking from earthquakes produced by local faults. Secondary effects such as surface rupture, lurching, or flooding are not considered probable. Liquefaction and seismically induced settlement are discussed in the following sections of this report.

## **LIQUEFACTION**

Liquefaction is a process by which soil below the water table temporarily loses strength and behaves as a viscous liquid rather than a solid. The types of soil most susceptible to liquefaction are clay-free deposits of sand and silts. Liquefaction is caused by seismic waves, primarily shear waves, passing through saturated, granular layers distorting the granular structures and causing loosely packed groups of particles to collapse. These collapses increase the pore water pressure between the grains, if drainage cannot occur. If the pore water pressure rises to a level approaching the weight of the overlying soil, the granular layer temporarily behaves as a viscous liquid rather than a solid, and liquefaction has occurred.

Based on the "Seismic Hazards Zone Map" published by the State of California, March 1998, Newport Beach Quadrangle, the site is in an area where historic occurrences of liquefaction, or local geologic, geotechnical, or groundwater conditions indicate a potential for liquefaction. Historical ground water is -5 bgs Water was encountered at 8.5 bgs.

The level to which the liquefaction potential is mitigated is a function of assumed risk. The following options are presented:

### **Option 1 - High Risk**

Structure is not designed to accommodate any differential settlements and may suffer significant distress during max credible settlements.

### **Option 2 – Moderate Risk**

Structure is designed to accommodate limited differential settlements and may sustain minor cracking induced by seismic settlements.

To provide moderate risk from the potential liquefaction effects, the structure shall be placed on a compacted fill mat, foundations shall be continuous or tied together with grade beams, foundations shall be reinforced with a minimum of four #4 bars, two top and two bottom, concrete slabs shall be a minimum of 4 inch actual thickness with #3 bars on 18 inch centers each way, and shall be tied into foundations. These are minimum geotechnical recommendations. Additionally, the structural engineer shall apply the latest seismic building codes in design.

### **Option 3 – Low Risk**

Structure is designed to withstand complete loss of ground support from major earthquake, along with possible large scale ground subsidence and lateral spreading.

## **CONCLUSIONS AND RECOMMENDATIONS**

Development of the site as proposed is considered feasible from a soils engineering standpoint, provided that the recommendations stated herein are incorporated in the design and are implemented in the field. Recommendations are subject to change based on review of final foundation and grading plans.

Since surface soils will be disturbed due to removal of the existing structures, it is recommended that the proposed structures be entirely supported by compacted fill. A minimum 3-foot compacted fill blanket below the bottom of footings is recommended.

For other minor structures like property line walls or retaining walls less than 4 feet high, competent native soils or compacted fill may be used.

## **PROPOSED GRADING**

Grading plans were not available at the time our work was performed. It is assumed that proposed grades will not differ significantly from existing grades. The following recommendations are subject to change based on review of final grading plans.

## **GRADING RECOMMENDATIONS**

Removal and recompaction of existing fill and loose native soils will be required to provide adequate support for foundations and slabs on grade.

Earthwork for foundation support shall include the entire building pad and shall extend a minimum of 5 feet outside exterior footing lines.

At the time of our investigation, groundwater was encountered at the depth of 8.5 feet below the existing grade.

Removals shall extend downward into competent earth materials or to at least 2 feet below proposed footing bottoms, whichever is deeper. Average removal depth is estimated at 3-4 feet.

The exposed excavation bottom shall be observed and approved by STRATA-TECH, Inc. prior to processing. Dependent on field observations, removals may be adjusted up or down. It may become necessary to stabilize wet pumping ground with  $\frac{3}{4}$  inch crushed rock enveloped in filter cloth a minimum thickness of 1 1/2 foot.

Subsequent to approval of the excavation bottom, the area shall be scarified 6 inches, moisture conditioned as needed, and compacted to a minimum of 90 percent relative compaction.

Fill soils shall be placed in 6 to 8 inch loose lifts, moisture conditioned as needed, and compacted to a minimum of 90 percent relative compaction. This process shall be utilized to finish grade.

Grading for hardscape areas shall consist of removal and recompaction of soft surficial soils. Removal depths are estimated at 1 to 2 feet. Earthwork shall be performed in accordance with previously specified methods.

The soil engineer shall review grading and/or foundation plans. Recommendations are subject to modification upon review of plans.

## **FOUNDATIONS ON COMPACTED FILL**

The proposed apartment units may be supported by continuous spread footings only placed a minimum depth of 24 inches below lowest adjacent finished grade utilizing an allowable bearing value of 1500 pounds per square foot. For column loads square pad footings may be utilized when connected by grade beams and may be designed for an allowable bearing value of 1800 psf. These values are for dead plus live load and may be increased 1/3 for total including seismic and wind loads where allowed by code.

It is recommended that all footings be reinforced with a minimum of two No. 4 bars (1 top and 1 bottom). The structural engineer's reinforcing requirements shall govern.

A representative of STRATA-TECH prior to placement of shall observe footing excavations steel or concrete to verify competent soil conditions. If unacceptable soil conditions are exposed mitigation will be recommended.

## **CHEMICAL ANALYSIS**

An onsite soil sample has been analyzed for soluble sulfates, soluble chloride, minimum resistivity and ph. . The soils are not considered corrosive to metal pipes or concrete.

## **LATERAL DESIGN**

Lateral restraint at the base of footings and on slabs may be assumed to be the product of the dead load and a coefficient of friction of .35. Passive pressure on the face of footings may also be used to resist lateral forces. A passive pressure of zero (0) at the surface of finished grade, increasing at the rate of 350 pounds per square foot of depth to a maximum value of 3500 pounds per square foot, may be used for compacted fill or native soils at this site. If passive pressure and friction are combined when evaluating the lateral resistance, the value of the passive pressure should be limited to 2/3 of the values given above.

## **RETAINING WALLS**

Unrestrained walls retaining drained earth may be designed for the following:

Surface Slope of Retained Material Horizontal to Vertical	Equivalent Fluid Pressure Pounds Per Cubic Foot
Level	30
5 to 1	32
4 to 1	35
3 to 1	38
2 to 1	43

Backfill should consist of clean sand and gravel. While all backfills should be compacted to the required degree, extra care should be taken working close to walls to prevent excessive pressure. Retaining walls should include subdrains consisting of 4 inch, SCH 40 or SDR 35 perforated pipe surrounded by 1 cubic foot per lineal foot of crushed rock. All wall backfill should be compacted to a minimum of 90 percent relative compaction.

All retaining structures should include appropriate allowances for anticipated surcharge loading, where applicable. In this regard, a uniformly distributed horizontal load equal to one-half the vertical surcharge shall be applied when the surcharge is within a horizontal distance equal to the wall height.

Retaining wall footing excavations shall be founded entirely in competent native soils or compacted fill. Footing bottoms shall be observed by a representative of STRATA-TECH, Inc., to verify competent conditions.

## **EXPANSIVE SOILS**

Results of expansion tests indicate that the near surface soils have a low to very low expansion potential.

## **SEISMIC DESIGN**

Based on the NEHRP-2015 the site is assigned soil profile  $S_d$ . The near source fault to the subject site is the Newport-Inglewood Fault, about 8 km from the site. This fault is a Type A fault with a magnitude of 6.8,  $PGA = 0.566$ ; Coordinates: 33.7471887, -117.92732060000003

The following seismic factors may be utilized in design:

$S_S$	1.326	$MCE_R$ ground motion (period=0.2s)
$S_1$	0.472	$MCE_R$ ground motion (period=1.0s)
$S_{MS}$	1.591	Site-modified spectral acceleration value
$S_{M1}$	0.863	Site-modified spectral acceleration value
$S_{DS}$	1.061	Numeric seismic design value at 0.2s SA
$S_{D1}$	0.576	Numeric seismic design value at 1.0s SA

## **SETTLEMENT**

The maximum total post-construction settlement is anticipated to be on the order of 1/2 inch. Differential settlements are expected to be less than 1/2 inch, measured between adjacent structural elements.

## **SUBSIDENCE & SHRINKAGE**

Subsidence over the site is anticipated to be on the order of 0.25 feet. Shrinkage of reworked materials should be in the range of 10 to 15 percent.

## **FLOOR SLABS**

The surface soils are non-plastic.



If a slab on grade is utilized, the slab shall be supported on engineered fill compacted to a minimum of 90 percent relative compaction. Slabs should be reinforced with at least No. 3 bars 18 inches on center both ways.

The soil should be kept moist prior to casting the slab. However, if the soils at grade become disturbed during construction, they should be brought to approximately optimum moisture content and rolled to a firm, unyielding condition prior to placing concrete.

In areas where a moisture sensitive floor covering will be used, a vapor barrier consisting of a plastic film (6 ml polyvinyl chloride or equivalent) should be used. The vapor barrier should be properly lapped and sealed. Since the vapor barrier will prevent moisture from draining from fresh concrete, a better concrete finish can usually be obtained if at least 2 inches of sand is spread over the vapor barrier prior to placement of concrete.

#### **UTILITY LINE BACKFILLS**

All utility line backfills, both interior and exterior, shall be compacted to a minimum of 90 percent relative compaction and shall require testing at a maximum of 2 foot vertical intervals.

#### **HARDSCAPE AND SLABS**

Hardscape and slab subgrade areas shall exhibit a minimum of 90 percent relative compaction to a depth of at least 1 foot. Deeper removal and recompaction may be required if unacceptable conditions are encountered. These areas require testing just prior to placing concrete.

#### **DRAINAGE**

Positive drainage should be planned for the site. Drainage should be directed away from structures via non-erodible conduits to suitable disposal areas. The structure should utilize roof gutters and down spouts tied directly to yard drainage.

Unlined flower beds, planters, and lawns should not be constructed against the perimeter of the structure. If such landscaping (against the perimeter of a structure) is planned, it should be properly drained and lined or provided with an underground moisture barrier. Irrigation should be kept to a minimum.

#### **ENGINEERING CONSULTATION, TESTING & OBSERVATION**

We will be pleased to provide additional input with respect to foundation design once methods of construction and/or nature of imported soil has been determined.

This office prior to commencement of grading should review grading and foundation plans so that appropriate recommendations, if needed, can be made.

Areas to receive fill should be inspected when unsuitable materials have been removed and prior to placement of fill, and fill should be observed and tested for compaction as it is placed.

## **AGENCY REVIEW**

All soil, geologic and structural aspects of the proposed development are subject to the review and approval of the governing agency(s). It should be recognized that the governing agency(s) could dictate the manner in which the project proceeds. They could approve or deny any aspect of the proposed improvements and/or could dictate which foundation and grading options are acceptable. Supplemental geotechnical consulting in response to agency requests for additional information could be required and will be charged on a time and materials basis.

## **LIMITATIONS**

This report presents recommendations pertaining to the subject site based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed by our exploratory excavations. Our recommendations are based on the technical information, our understanding of the proposed construction, and our experience in the geotechnical field. We do not guarantee the performance of the project, only that our engineering work and judgments meet the standard of care of our profession at this time.

In view of the general conditions in the area, the possibility of different local soil conditions may exist. Any deviation or unexpected condition observed during construction should be brought to the attention of the Geotechnical Engineer. In this way, any supplemental recommendations can be made with a minimum of delay necessary to the project.

If the proposed construction will differ from our present understanding of the project, the existing information and possibly new factors may have to be evaluated. The Geotechnical Consultant should review any design changes and the finished plans. Of particular importance would be extending development to new areas, changes in structural loading conditions, postponed development for more than a year, or changes in ownership.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans and that the necessary steps are taken to see that the contractors and subcontractors carry out such recommendations in the field.

This report is subject to review by the controlling authorities for this project.

We appreciate this opportunity to be of service to you.

Respectfully submitted:  
STRATA-TECH, INC.

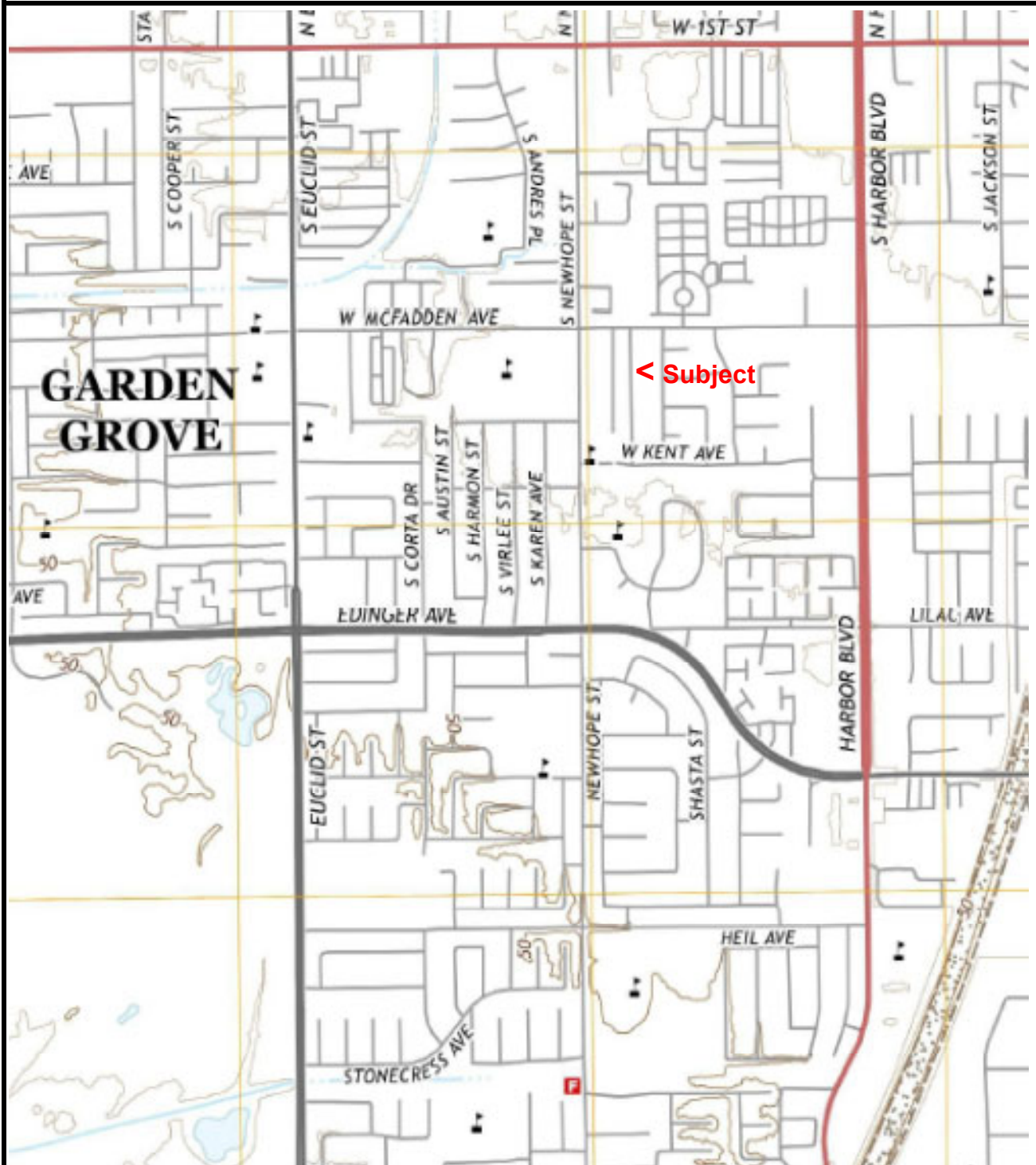
A blue ink signature of Roland Acuña is written over a circular professional seal. The seal is for a Registered Professional Geologist in the State of California, with the name ROLAND ACUÑA, No. 2113, and Exp. 09-30-18.

Roland Acuña, CEG  
President

A blue ink signature of Larry Finley is written over a circular professional seal. The seal is for a Registered Professional Engineer in the State of California, with the name LAWRENCE R. FINLEY, No. RE 46606, and Exp. 06-30-18.

Larry Finley  
RE 46606

# VICINITY AERIAL MAP



Preliminary Geotechnical Investigation  
305 N. Mountain View Street  
Santa Ana, California

Work Order 288219

Plate No. 1

**STRATA - TECH, INC.**



[illegible]

REVISIONS

REACH AUK  
PCS 81 5A-314-83  
ELEV. 67,793 (200)  
WIND 3 3/4" OCS UTMARLE HEND-44 51-10

111

PREPARE UNDER THE SUPERVISION OF  
**DMS**  
CONSULTANTS, INC.  
CIVIL ENGINEERS

CITY OF SANTA ANA  
8 UNIT APARTMENT COMPLEX  
**CONCEPT GRADING PLAN**  
305 N. MOUNTAIN VIEW ST. SANTA ANA, CALIFORNIA

SHEET 07/08/19 SHEET 1 OF 1

## SUMMARY OF BORING NO. B-1

Date: 7/22/2019

Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples U B	Depth (Ft.)	Description
				<p>Lt-Grayn, Sand, fn, silty dry</p> <p>Buff , clean fn-med sand</p> <p>5</p> <p>Buff fn-crs Sand, clean,damp</p> <p>Sand, fn, trace of silt, wet, capillary fringe</p> <p>10</p> <p>End of boring at 10 feet water @ 9' pinching @ 8.5</p> <p>15</p>
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California				Work Order 288219
				Plate No.

**STRATA - TECH, INC.**

SUMMARY OF BORING NO. B-3				
Date: 7/22/2019				
Dry Density (Pcf)	Moisture (% Dry Wt.)	U B Samples	Depth (Ft.)	Description
				Lt-Grayn, Sand, fn, silty dry
				Buff , clean fn-med sand
			5	End of boring at 5 feet no water, no caving
			10	
			15	

Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California	Work Order 288219
	Plate No.

STRATA - TECH, INC.

SUMMARY OF BORING NO. B-3					
Date: 7/22/2019					
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples U B		Depth (Ft.)	Description
					Lt-Grayn, Sand, fn, silty dry
					Buff , clean fn-med sand
				5	End of boring at 5 feet no water, no caving
				10	
				15	

Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California	Work Order 288219
	Plate No.

STRATA - TECH, INC.



## **APPENDIX A**

This appendix contains a description of the field investigation, laboratory testing procedures and results, site plan, and exploratory logs.

### **FIELD INVESTIGATION**

The field investigation was performed on July 22, 2019, consisting of the drilling exploratory borings by auger at the locations shown on the attached Site Plan, Plate 2. As drilling progressed, personnel from this office visually classified the soils encountered, and secured representative samples for laboratory testing.

Undisturbed samples for detailed testing in our laboratory were obtained by pushing or driving a sampling spoon into the material. A solid barrel-type spoon was used having an inside diameter of 2.5 inches with a tapered cutting tip at the lower end and a ball valve at the upper end. The barrel is lined with thin brass rings, each 1 inch in length. The spoon penetrated into the soil below the depth of pit approximately 6 to 18 inches. The central portion of this sample was retained for testing. All samples in their natural field condition were sealed in airtight containers and transported to the laboratory.

Descriptions of the soils encountered are presented on the attached Boring Logs. The data presented on these logs is a simplification of actual subsurface conditions encountered and applies only at the specific boring location and the date excavated. It is not warranted to be representative of subsurface conditions at other locations and times.

### **LABORATORY TESTING**

Field samples were examined in the laboratory and a testing program was then established to develop data for preliminary evaluation of geotechnical conditions.

Field moisture and dry densities were calculated for each undisturbed sample.

Maximum density-optimum moisture relationships were established for use in evaluation of in-situ conditions and for future use during grading operations.

Direct shear tests were performed on specimens at near saturation under various normal loads. The results of tests are based on 80 percent peak strength or ultimate strength, whichever is lower, and are attached.

Expansion tests were performed on typical specimens of natural soils in accordance with the procedures outlined in U.B.C. Standard 18-2

## TEST RESULTS

### Maximum Density/Optimum Moisture (ASTM:D-1557)

Boring	Depth in Feet	Maximum Density (pcf)	Optimum Moisture (%)
1	1 – 3	116.2	9.3

### In-Situ Dry Density/ Moisture

Boring	Depth in Feet	Dry Density (pcf)	Moisture (%)
1	3	102.7	7.8
1	5	98.4	9.6

### Expansion Index (U.B.C. Standard 18-2)

Boring	Depth in Feet	Expansion Index	Expansion Potential
1	1 – 3	0	Very Low
2	1 – 3	0	Very Low

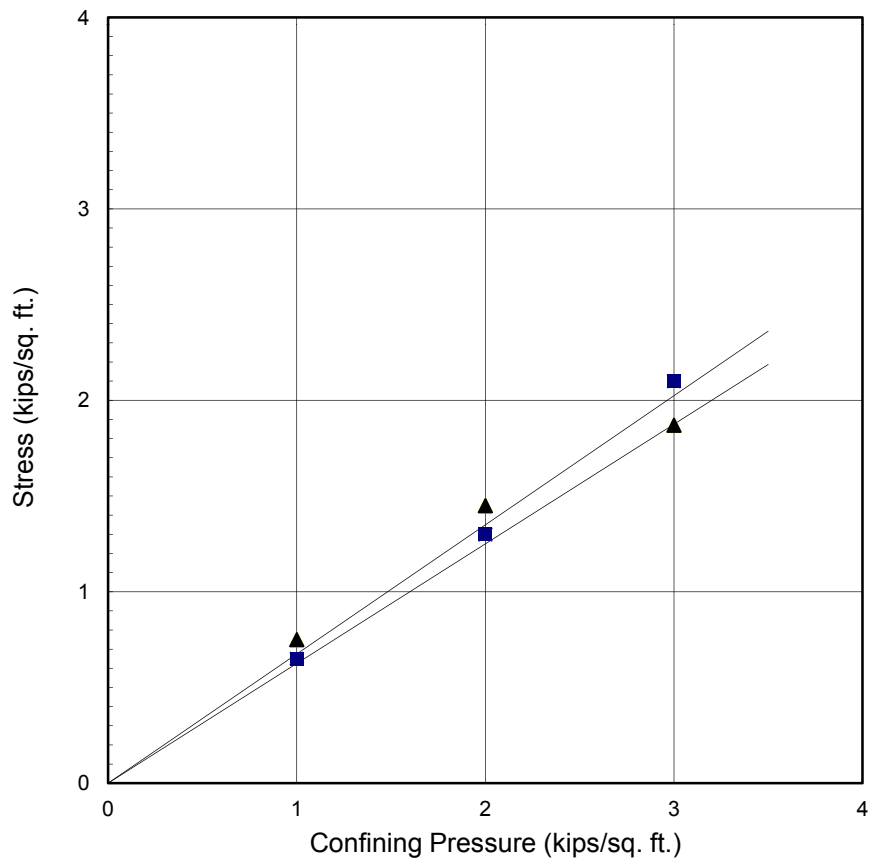
### Direct Shear (ASTM:D-3080)

Boring	Depth in Feet	Cohesion (psf)	Angle of Internal Friction (degrees)
1	3	0	34
1	5	0	35

### Chemical Analysis

Boring Number	Depth (feet)	Soluble Sulfate	Soluble Chlorides	Minimum Resistivity	PH
2	0-3	36	77	5128	7.2

## SHEAR TEST RESULTS



All samples were tested at saturated conditions.

Based on 80% peak strength or ultimate strength, whichever is lower

- ♦ Boring No. 1 @ 3 Feet  
Cohesion = 0 psf    Friction Angle = 34 degrees
- Boring No.2 @ 3 Feet  
Cohesion = 0 psf    Friction Angle = 32 degrees

Geotechnical Engineering Investigation  
305 N. Mountain View Street  
Santa Ana, California

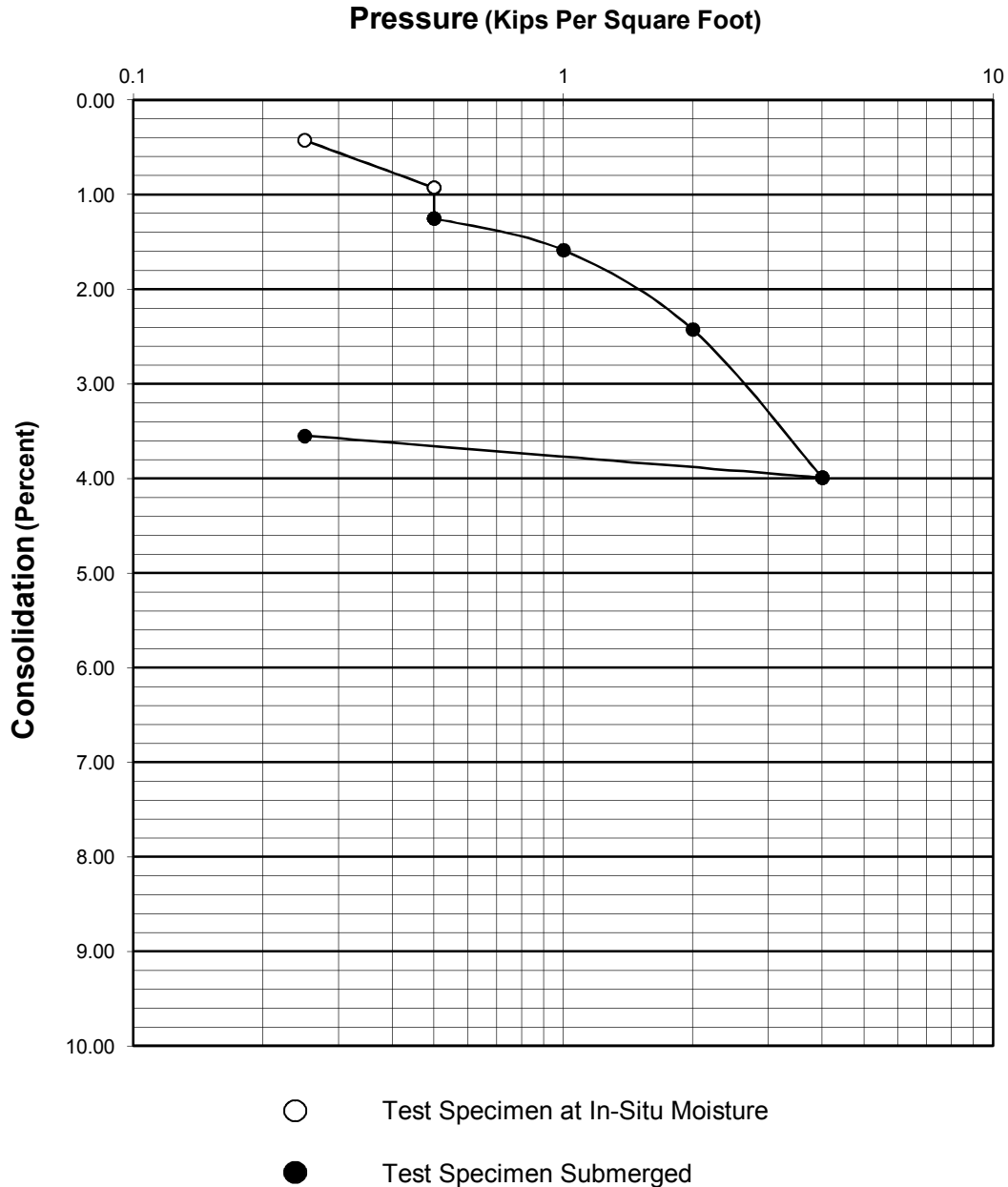
Work Order    288219

Plate No.      5

***STRATA - TECH, INC.***

# CONSOLIDATION TEST RESULTS

Boring No. 1 @ 3 Feet



Preliminary Geotechnical Investigation  
305 N. Mountain View Street  
Santa Ana, California

Work Order 288219

Plate No.

**STRATA - TECH, INC.**

**SPECIFICATIONS FOR GRADING**

***SITE CLEARING***

All existing vegetation shall be stripped and hauled from the site.

***PREPARATION***

After the foundation for the fill has been cleared, plowed or scarified, it shall be disced or bladed until it is uniform and free from large clods, brought to a proper moisture content and compacted to not less than 90 percent of the maximum dry density in accordance with ASTM:D-1557 (5 layers - 25 blows per layer; 10 lb. hammer dropped 18"; 4" diameter mold).

***MATERIALS***

On-site materials may be used for fill, or fill materials shall consist of materials approved by the Soils Engineer and may be obtained from the excavation of banks, borrow pits or any other approved source. The materials used should be free of vegetable matter and other deleterious substances and shall not contain rocks or lumps greater than 8 inches in maximum dimension.

***PLACING, SPREADING, AND COMPACTING FILL MATERIALS***

Where natural slopes exceed five horizontal to one vertical, the exposed bedrock shall be benched prior to placing fill.

The selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to ensure uniformity of material and moisture of each layer.

Where moisture of the fill material is below the limits specified by the Soils Engineer, water shall be added until the moisture content is as required to ensure thorough bonding and thorough compaction.

Where moisture content of the fill material is above the limits specified by the Soils Engineer, the fill materials shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to not less than 90 percent of the maximum dry density in accordance with ASTM:D-1557 (5 layers -25 blows per layer; 10 lbs. hammer dropped 18 inches; 4" diameter mold) or other density tests which will attain equivalent results.

***SPECIFICATIONS FOR GRADING***

***PAGE 2***

Compaction shall be by sheepsfoot roller, multi-wheel pneumatic tire roller or other types of acceptable rollers.

Rollers shall be of such design that they will be able to compact the fill to the specified density. Rolling shall be accomplished while the fill material is at the specified moisture content. Rolling of each layer shall be continuous over the entire area and the roller shall make sufficient trips to ensure that the desired density has been obtained. The final surface of the lot areas to receive slabs on grade should be rolled to a dense, smooth surface.

The outside of all fill slopes shall be compacted by means of sheepsfoot rollers or other suitable equipment. Compaction operations shall be continued until the outer 9 inches of the slope is at least 90 percent compacted. Compacting of the slopes may be progressively in increments of 3 feet to 5 feet of fill height as the fill is brought to grade, or after the fill is brought to its total height.

Field density tests shall be made by the Soils Engineer of the compaction of each layer of fill. Density tests shall be made at intervals not to exceed 2 feet of fill height provided all layers are tested. Where the sheepsfoot rollers are used, the soil may be disturbed to a depth of several inches and density readings shall be taken in the compacted material below the disturbed surface. When these readings indicate that the density of any layer of fill or portion there is below the required 90 percent density, the particular layer or portion shall be reworked until the required density has been obtained.

The grading specifications should be a part of the project specifications.

The Soil Engineer shall review the grading plans prior to grading.

***INSPECTION***

The Soil Engineer shall provide continuous supervision of the site clearing and grading operation so that he can verify the grading was done in accordance with the accepted plans and specifications.

***SEASONAL LIMITATIONS***

No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, fill operations shall not be resumed until the field tests by the Soils Engineer indicate the moisture content and density of the fill are as previously specified.

***EXPANSIVE SOIL CONDITIONS***

Whenever expansive soil conditions are encountered, the moisture content of the fill or recompacted soil shall be as recommended in the expansive soil recommendations included herewith.

# Appendix D:

## Phase I Environmental Assessment

# **S & S Commercial Environmental Services, Inc.**

Phone(949)650-4994 Fax (909)498-0302 e-mail [s.quart@verizon.net](mailto:s.quart@verizon.net) [s.quart@att.net](mailto:s.quart@att.net)

---



**TOP: East Side of Subject Property**

**BOTTOM: Overview of Subject Property**

**PHASE ONE ENVIRONMENTAL SITE ASSESSMENT  
305 N MOUNTAIN VIEW STREET  
SANTA ANA, CA 92703**

**16725 Birchwood Lane Fontana, CA 92336**



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**October 23, 2019**

**S&S Job SE19009**

**CONFIDENTIAL / LENDER-CLIENT PRIVILEGE / WORK PRODUCT**

**ATTN: Messrs. Bill Jager & Steven Jones  
THE JAGER COMPANY. LTD  
872 Wendt Terrace  
Laguna Beach, CA 92651**

**RE: Phase I Environmental Site Assessment  
305 N. Mountain View Street  
Santa Ana, CA 92703**

**N 33-44-50, W 117-55-38 (NAD 83)  
33.747188, -117.92732  
Township: 05S Range: 10W Section: 16  
Baseline: San Bernardino**

**1.0 INTRODUCTION**

This report presents the results of our Phase I Environmental Site Assessment (Phase 1) performed on the subject property known as 305 N. Mountain View Street located in the City of Santa Ana in the County of Orange, California.

The proposed use includes all structures on the property being cleared, the sewer capped, and the property redeveloped with a multi-tenant residential use.

The User of this Phase I is the addressee above.

This Phase I Report is being performed as disclosure for a loan with the property as collateral.

The proposed use includes redevelopment with a multi-tenant residential use.

The following Phase I Site Assessment is intended to meet the Scope of Work requirements and procedures included within 40 CFR §312 et al and ASTM E 1527-13 for a finance loan on the above property.

The purpose of this report is to provide an AAI- Compliant Phase I environmental Site Assessment to evaluate the risks associated with providing financing and accepting the Property as collateral.

There were no Special Conditions for this Phase I Site Assessment Environmental Report.

The site inspection was performed on Sunday Tuesday October 25, 2019. This Phase I is valid per ASTM 1527 -13 Section 4.6 for 180 days from that date or March 19, 2019.

All appropriate inquiry into the previous ownership and uses of the Property was conducted to identify all potential environmental conditions that may have a material impact on the Property and to minimize the liability both on-site and from adjoining and adjacent properties which may have environmental issues germane to the subject property.

*Current and former State of California & Local Agency Information Reviewed*

*	Cal-EPA	Envirostor
*	Regional Water Quality Control Board	Geotracker
*	DOGGR	Oil Well Maps

No Significant Data Gaps were identified.

A Preliminary Title Report was not provided for research for Environmental Liens. Based on the research for this report, a Google Internet Search, CAL-EPA Envirostor and known history, no environmental liens are expected.

Sanborn Fire Insurance Maps were not available for research as the last map drawn before the subject property was developed.

Cross Streets Directories were not considered necessary for this report due to the known residential occupancies on and around the property.

There were current De Minimis Environmental Conditions that would include environmental concerns identified by S&S that warrant discussion but do not qualify as RECs, as defined by the ASTM Standard Practice E1527-13 or ASTM - 2600-15. Those are discussed in 2.0 Principal Findings.

This report is intended to satisfy the requirements of a Phase I Environmental Site Audit as outlined in the *ASTM E-1527-13*, *ASTM 2600-15* and the EPA “*All Appropriate Inquiries*” November 2006 ruling.

## **Report Organization**

This report is divided into sections which discuss the field investigation, government records search, regulatory agency contacts and recommendations. Appendices follow the text.

### **1.1 Purpose and Scope of Work**

The purpose of a Phase I Environmental Site Assessment is to discover any past or present environmentally-related events which may negatively impact the subject property. This includes a search of all available records concerning the property and the performance of an on-site inspection. Procedures followed in the performance of a Phase I Environmental Site Assessment include executing a government records search, researching permits for the site where prudent, interviewing the tenants of the subject property or neighbors in close proximity, studying aerial photographs, interviewing personnel at the appropriate regulatory agencies and conducting a physical survey of the subject property.

### **1.2 Involved Parties/Information Sources**

This *S & S Commercial Environmental Services, Inc.*, Phase I Environmental Site Assessment is produced through the efforts of an Environmental Professional EPA CFR 40 Section 312.22 working in conjunction with Federal, State and county regulatory agencies. Environmental Records Search (ERS) (2018) and Environmental Data Resources (2014) maintain a comprehensive, computerized

data base of pertinent, environmentally-related records, referred to as an ERS or EDR Report, which is updated on a regular basis. This data base is researched for Category I, II, III and IV sites within a mile of the subject property and a report is generated based upon the available regulatory records. The report is reviewed for sites which might impact the subject property and an inquiry is directed toward those sites within the 2,000-foot hazardous waste disclosure zone.

The field investigation includes a site assessment, observations of the neighboring facilities and verification of permits and building records, as necessary. This review and inspection were performed by Stephen A. Quartararo, Environmental Professional CFR Title 40 Section 312.22, California General Engineering Contractor, Hazardous Materials Certified, California General Building Contractor, California Certified Asbestos Contractor, California Drilling Contractor and ASPE Professional Estimator.

**Definitions modified and added in the ASTM-1527 2013 Revision include:**

- a. Simplified Recognized Environmental Condition (REC) definition to “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.”
- b. Stated a Limitation on the definition of an HREC (historical REC) to closed RECs that have been completely resolved (“clean closure”) with no restrictions. Those undergoing continued maintenance or monitoring should be discussed.

Also, for HREC’s, if there has been a change in the regulatory criteria and if the Environmental Professional (EP) considers this past release to now be a REC at the time the Phase I ESA investigation is conducted,” ... the condition shall be included in the conclusions section of the report as a REC.”

- c. Review of Title and Judicial Records for Environmental Liens or Activity and Use Limitations (AULs) continues to be a User (Client) requirement that is to be conducted by a Title professional, not the EP or Phase I Professional. Buyer or Lender needs to ensure that Title companies are searching judicial records.
- d. (VES) Vapor Encroachment Screening under E2600-15 is a referenced document in E1527 2013 under Section 2.1. Under this Standard Vapor migration should be treated no differently than the way contaminated groundwater migration is considered in a Phase I ESA and should be discussed using the CERCLA definition of “release” and “environment” which includes vapor.

**Section 2.1 of ASTM E1527 Standard - Vapor Encroachment Screening -**

42 U.S.C. § 9601(22) defines a “release” as “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or

pollutant or contaminant” This includes solid, liquid and the ensuing migration of vapor into soil and water or from water upwards through soil occupied areas

Based upon the historical and present uses identified regarding the subject and adjoining properties, vapor intrusion issue is not expected, and Tier II Vapor Testing is not recommended. See 12.10 Tier I Vapor Encroachment Screening (VES) in Appendix

## **2.0 PRINCIPAL FINDINGS**

### **2.1 Summary of Operations and Environmental Discrepancies**

Former Operations - The subject property is comprised of a large rectangular parcel approximately 32,500 square feet in area which was agricultural until the 1960's when a single-family residence was constructed along with other dwelling and shed structures. The property has remained residential with the east side of the parcel always an open yard with grass and flowers.

Current Operations – The subject property remains residential with an open yard on the east side with dry grass.

There were no environmental issues noted beyond presumed and suspected building materials which will be discussed in 2.0 Principal Findings.

Neighboring Properties – West across N. Mountain View Street are single family residential properties. South are multi-family residential properties. East is a mobile home park. North are multi-family residential properties.

No were no past or current significant environmental issues noted adjacent or adjoining the subject property.

### **2.2 Summary of Building Materials and Environmental Discrepancies De Minimis Environmental Issues**

Building Materials - The residential buildings on the subject property were constructed prior to 1980. Presumed friable and non-friable asbestos-containing materials, lead paint, lead in water valves and Pcb in any fluorescent light ballasts is suspected.

None of these are considered an issue for this report beyond being presumed and suspected as they will be removed prior to or during demolition and land clearing according to regulations.

A summary of the current regulatory status of asbestos precedes further description.

#### **2.2.1 Asbestos**

Background - Asbestos is a natural occurring mineral fiber utilized in a multitude of building material products due to its high tensile strength and excellent fire-resistant properties. The EPA has defined asbestos materials as being either *friable* or *non-friable* materials. *Friable* material is defined as being easily broken or crushed by

hand pressure (e.g., soft acoustical ceilings or blown-on fireproofing).

*Non-friable* asbestos is generally found in pre-manufactured products that bind the asbestos in an adhesive material, such as roofing felts, floor tile, transite pipe and mastics. This is significant, due to the ability to create a fiber release and cause human exposure during normal activities. The *EPA* currently does not require the removal of asbestos-containing materials that do not present a problem for human exposure. Most *friable* asbestos-containing materials were banned in building materials by 1978.

In October 1995, a new *FED-OSHA* ruling became effective which redefined building materials perceived as asbestos-containing into four classes of work and modified the way in which these asbestos-containing materials are handled.

Under the *NESHAPS* laws of 1976 and as later amended, asbestos does not have to be removed from a facility until such time as it undergoes major renovations or is demolished. Until that time, the present emphasis by the *EPA* is to recommend repair of any damaged areas and management of the asbestos-containing materials.

Prior to any renovation work being done involving asbestos-containing materials of 260 lineal feet or 160 square feet in area, the local branch of the *EPA* must be notified.

Prior to the demolition of any building or house, mandatory bulk sampling must be accomplished and, if asbestos is present, notification must be made to the local branch of the *EPA* and *Air Quality Management District*.

In California, for the removal of any asbestos-containing materials greater than 0.1% by weight, notifications must also be made to *CAL-OSHA* and a licensed contractor with an asbestos certification is required for any work which exceeds 100 square feet.

### **2.2.2 Building Materials Presumed to Contain Friable Asbestos**

Friable asbestos-containing building materials were banned for manufacture and sale in the United States in 1978 and all stocks remaining on the shelves are presumed to have been used up by 1980.

The structures on the subject property were constructed prior to 1980 and any wallboard mud or acoustic is presumed friable asbestos-containing materials. These materials will be removed prior to demolition if present and are not a current issue for the subject property.

## **2.3 Building Materials Presumed to Contain Non-Friable Asbestos**

Asbestos was never banned from use in building materials such as floor tile, cement-based products and roofing materials, as these materials were considered *non-friable* by the *EPA* and not potentially a great hazard. After *friable* asbestos was banned, significant labeling requirements went into effect for the *non-friable* asbestos-containing materials and many substitutes became available. Asbestos-containing

flooring materials and mastic were used less and less in construction after 1978 and, by 1984, their use in buildings constructed in the United States was nearly non-existent due to the labeling requirements and potential liability to both the manufacturer and real estate developer. Building materials presumed to contain asbestos are as follows.

Flooring Materials – Any areas of vinyl type flooring materials on the subject property are presumed to contain non-friable asbestos.

Roof Mastic/Sealants - Roof mastic around penetrations is expected to contain non-friable asbestos.

These materials are not of current concern and will be removed prior to demolition.

- 2.2.2. Radon-** The subject property is in a Radon Zone "3" (Predicted avg for county: < 2 pCi/L) and no Radon Exposure Issues are expected.

(Predicted avg for county: < 2 pCi/L)

For zip code 92703:

Number of tests per zip code: 2

Number of tests where radon is > 4 pCi/L: 0

Percentage of test where radon is > 4 pCi/L: 0.00% EPA Radon Zone: 3

- 2.2.3 Lead Paint** – Lead is expected in the paint on the eaves, eaves and any older window frames. Lead paint is outside the scope of this investigation and is part of the legal demolition process.

- 2.2.4. Poly-Chlorinated Biphenyl (Pcb)** was a material widely used as a coolant in electrical equipment from the 1920s to the 1970s. Pcb was banned from use in most electrical equipment in the latter part of the 1970s and 1980s, after it was determined that Pcb could cause health problems if ingested and cancer when they underwent a chemical change as a result of a fire or explosion. Small amounts of Pcb were used as a coolant in fluorescent light fixture ballasts until 1978, at which time they were banned, and all fluorescent light ballasts were labeled with a “no pcb” label. Pcb was outlawed for use in Transformers and Florescent Light Fixture ballasts in 1978/79. Pcb containing light transformers or ballasts are suspected on the subject property based upon the date of construction. They are not a current issue.

Prior discussions with *Southern California Edison* found that all of the pad and pole-mounted transformers in the City have been checked. There is no threat of Pcb-containing transformers in the area.

- 2.2.5 Lead In Drinking Water** No studies of lead in drinking water were performed. A prohibition on lead in residential plumbing materials has been in effect since 1986. Lead in water valves is outside the scope of this investigation.



**226** **Mold** results from water leaks and plumbing leaks. Mold was not seen in the limited view of the property and is not an issue for this report as the buildings are proposed to be demolished and the lot cleared.

**227 Flood Plain**

Panel: 06059C0256J, Effective Date: 12/3/2009

Zone A - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones

**2.2.8. Wetlands**

The subject property is not part of any National Wetlands Inventory and no Wetlands were noted on the subject property during the site inspection.

**2.2.9. Indoor Air Quality - Subjective**

Unexpected or unsatisfactory indoor air quality was not identified via Olfaction (smell). There were no areas identified in this research of concern for Unsatisfactory Indoor Air Quality from chemicals, gases or regulated materials being used on or off site, present from past activities or building materials used in building construction.

**2.2.10 Vapor Intrusion**

Vapor intrusion is a potential human exposure pathway that people may come into contact with hazardous vapors while performing their day-to-day indoor activities.

Vapor intrusion occurs when vapor-forming chemicals migrate from any subsurface source into an overlying building which can occur in ways similar to that of radon gas seeping into homes.

**2.1.11 Underground Tanks**

There were no underground tanks known to be on the subject property.

**2.1.12 Oil and Gas Wells Within 1500 Feet**

A review of DOGGR Oil and Gas Maps did not identify and oil wells within one mile of the subject property. (See Map in DOGGR Section of Appendix)

**2.2.13 Vapor Encroachment Condition**

ASTM E2600 - 15: ASTM defines the term "Vapor Encroachment Condition" - presence or likely presence of "chemical of concern" vapors in the subsurface of the Target Property caused by the release of vapors from contaminated soil or groundwater or both either on or near the Target Property as identified by the Tier 1 or Tier 2 procedure.

The EPA has established a 100-foot vapor encroachment zone which requires properties known or suspected to be contaminated within this zone to be discussed. A Tier 1 Vapor Encroachment Screening was performed with no vapor Encroachment Conditions noted. See Tier I Vapor Encroachment Screening in appendix.

### **3.0 SITE OVERVIEW**

#### **3.1 Location**

The subject property is on the east side of N. Mountain Street south of 5<sup>th</sup> Street and east of Euclid Avenue in the City of Santa Ana located in Orange County, CA.

#### **3.2 Adjacent Properties**

To the south of the subject property are multi-family dwellings

East is a mobile home park.

West across N. Mountain View Street are single family residences.

North are multi-family dwellings

There are no environmentally unsafe emissions or discharges currently noted from any adjacent properties during the site visit and there is nothing in the published record or seen during the site inspection which would indicate long-term problems for the subject property from any of those properties.

#### **3.3 Site Description**

The subject property is a rectangular-shaped parcel occupied by two single-story residential dwellings and two additional buildings in the middle of the property. There is a large open lot on the east side of the property.

The buildings are wood frame and stucco with expected standard wallboard interiors.

There were no current underground tanks or vent pipes found on or around the subject property

### **4.0 SITE HISTORY AND OPERATIONS**

#### **4.1 Building Permit History & Sanborn Fire Insurance Map Review**

The subject property is not shown on the Sanborn Fire Insurance Maps. See 2.0 in Appendix.

According to the Orange Coast Title record in the Appendix and Historical Aerials Photographs the buildings were constructed in the early 1960's as residential.

#### **4.2 Operations**

Former Operations - The subject property was agriculturally related, vacant land and then residential beginning in the 1960's

##### Current Operations

The subject property remains occupied by residential structures.

#### **4.3 Operational Permits, Manifests, MSDS**

EPA ID Number - An *EPA* ID number is used by a facility to dispose of regulated hazardous chemicals over a certain specified quantity. There are no *EPA* RCRA regulated hazardous materials being generated or disposed of from the subject property and there are no *EPA* ID numbers for reporting of same.

Hazardous Waste Manifests - Hazardous waste manifests are used to transport regulated hazardous wastes for legal disposal. There are no regulated wastes being generated and disposed of from the subject property.

Air Emissions - There are no current or historical known regulated air emissions from the subject property.

Material Safety Data Sheets (MSDS) - Material Safety Data Sheets are required for hazardous materials being used in a business on-site. There are no MSDS as the property is residential.

## **5.0 ENVIRONMENTAL SETTING**

### **5.1 Regional Physiographic**

The subject property is in a coastal area at a level approximately 71 feet above sea level, according to the US Geological Survey.

Geology - The Orange County Coastal Plain is underlain by a sedimentary trough which began forming in the Miocene time. The Miocene to Late Pleistocene sediments consists of interbedded marine and nonmarine sequences. The Late Pleistocene to Recent deposits is continental alluvial and fluvial sediments which represent changing depositional environments interrupted by erosional events. The principal geologic unit of interest in the area is the recent alluvium consisting of unconsolidated gravel, sand and silt.

The subject site is located in an area referred to by the California Water Resources Board as the Santa Ana River Basin. As such, the subject property is located on widely distributed sedimentary deposits of alluvium and colluvium from the stream channel deposits of the Santa Ana River and its local tributary.

The site geology consists of alluvial deposits of the Santa Ana River Flood Plain, whose active channel exists approximately one mile west of the subject property. Soil types derived from these sediments consist of fine to medium-grained, silty to very coarse sand.

### **5.2 Soil Conditions**

The subject property is covered with asphalt and concrete and some landscaping.

Based upon the known history of activities on the subject there is no soil contamination expected.

There are no standing water or wetland issues.

### **5.3 Groundwater Conditions**

Site specific depth to groundwater is not within the scope of this survey. Site specific depth to groundwater can only be determined by soil borings.

There were no tests found of the groundwater directly under the subject property.

## **6.0 RESULTS OF INVESTIGATION**

### **6.1 Site Inspection Observations**

Overall, the subject property appeared clean and maintained. There were no spots or discolorations of the concrete to indicate the storage or use of regulated materials or stressed vegetation to indicate corrosive material usage formerly or currently.

The surrounding properties appear to be free of any current problems or safety issues which would be a source of migratory contamination to the subject property.

### **6.2 Regulatory Agency Contacts**

#### **6.2.1 City of Santa Ana Water Department**

Ms. Nancy Bailey, Water Quality Inspector with the City of Santa Ana Water Department, was formerly contacted concerning the water depth and supply in the area. She said that the first potable water is at about 688 feet, the first depth that they draw water from their wells. She stated that 30% of their water is purchased from the Metropolitan Water District (MWD). Ms. Bailey also stated that there is no pollution found in any of their wells and that all wells are tested in conformance with Title 22 regulations. Ms. Bailey explained that all water supplied to the end users meets the State of California's Drinking Water Requirements.

#### **6.2.2 California Department of Conservation, Division of Mines and Geology**

The California Department of Conservation, Division of Mines and Geology, was contacted regarding the proximity of active earthquake faults. The subject property is not part of any special studies zone pursuant to the Alquist-Priolo Earthquake Fault Zones Act of 1972, which mandated studies of active faults in California. An active fault zone is described by the State Mining and Geology Board "as one which had surface displacement within the Holocene time (about the last 11,000 years)."

#### **6.2.3 California Division of Oil and Gas**

A review of the State of California Division of Oil and Gas Maps indicated an oil well that was drilled in 1943 northeast across Katella Avenue. A review of records found the well was an abandoned dry hole. It does not appear that any wells were surface drilled into the subject property. (See DOGGR in Appendix)

#### **6.2.4 Southern California Edison**

There is no Pcb in any of the transformers owned by SCE. Any transformers with Pcb have been replaced or the fluids have been changed.

#### **6.2.5 South Coast Air Quality Management District (SCAQMD)**

Finds, was accessed online regarding air emission permits on the property. There are no inactive or active permits.

#### **6.2.6 Department of Health Services, State Department of Radon**

Mr. David Quinton, Environmental Health Specialist with the *State Department of Radon*, was previously contacted regarding the presence of radon in the area. He said that the most recent studies done predicted less than 2.4% of homes and less than

0.04% of the schools in the State of California would be over the *EPA's* action level of four picocuries/liter. He stated that this study was performed in existing homes and that there was no effective methodology of correlating soil samples to houses. Mr. Quinton explained that much is dependent upon the soil under a residence and the type of foundation a house is built upon. Additionally, the standard is based upon exposure of 18 hours per day for 70 years, which would not correlate to a business exposure. Mr. Quinton said that, with the exception of Madera County in Northern California, the *State of California* has nearly concluded all radon testing in the State and has found that there is little likelihood of a significant radon exposure in California.

Mr. Quinton said that business exposures had not been within the parameters of any of these studies due to the limited time most business people are in one location. He also said that the State does not plan to study businesses based upon the previous studies and that there is no standard for a commercial enterprise being conducted outside of a home.

## **6.2 Personal Interviews, Site Records Review**

### **6.2.6 Personal Interviews**

No interviews were conducted or considered necessary for this report based upon historical aerial photographs depicting the residential nature of the area since the early part of the last century. The residential tenants were not disturbed.

Photographs of the rear yard were taken from the multi-family property to the north. No access was available from the east side as the mobile homes and yards abut the masonry dividing wall.

### **6.2.7 Site Records Review**

The subject property is residential and there were no records to review.

## **6.3 Historical Aerial Photograph & Sanborn Fire Insurance Map Review**

Sanborn Fire Insurance Map and historical aerial photos were reviewed as available for historical uses of the property. Historical Aerials Photos from 1938, 1953, 1963, 1972, 1985, 1992, 1994, 2003, 2007, 2015, & 2019 and a *USGS* topographic map from 1963 - 1984 were reviewed to determine structures on or around the subject property. The photographs were specifically examined for evidence of hazardous materials, as well as on and off-site features that may affect the environmental quality of the property. These features include sumps, pits, ponds, lagoons, aboveground tanks, landfills, outside storage of hazardous materials and general land use. None were identified.

*Sanborn Map Review* – There were no Sanborn Fire Insurance Maps for the subject property.

1938 - The subject property is agricultural in an area of agriculture. There is a lot of undeveloped land.

1953 – The area of the subject property remains agricultural and vacant with homes beginning to be constructed to the west and further south. There is a lot of undeveloped land.

1963- There is now a house on the subject property and other structures. To the east is the start of a mobile home park. The area is being developed. There are single family homes to the south.

1972 – There are no significant changes to the subject properties or surrounding properties.

1985 - There are no significant changes to the subject property. There is a mobile home park to the east, an apartment complex to the north.

1994 – The residential homes to the south have been replaced with apartments. There are no other significant changes on or around the subject property.

2003 - There are no significant changes to the subject or adjoining properties

2007 - There are no significant changes to the subject or adjoining properties.

2015 - There are no significant changes to the subject or adjoining properties

2019 - There are no significant changes to the subject or adjoining properties.

Closeups of sections of relevant aerial photographs, and the topographic map were selected to appear in this report to show any structures that might have been formerly constructed on or around the subject property.

#### **6.4 Synopsis of Previous Environmental Investigations**

There were no prior environmental reports identified in the records researched or provided by the Client.

#### **6.5 Summary of Government Records Search**

NOTE: This government records summary is based, in part, on investigating critical or "border zone" properties near the subject property. The *State of California, Department of Health Services* has defined these sites as being within 2,000 feet (or approximately 0.4 mile) of the subject property. Other sites more distant in proximity may be listed but not considered critical and, therefore, not further investigated.

The following is a summarized form of the detail provided in the ERS Report in the Appendix.

The subject property is not listed.

**CATEGORY ONE: NPL, SCL, SPL, RCRA CORRACTS, CERCLIS/NFRAP, RCRA TSD, SWLF, TRIBAL LANDS, Envirostor**

This category is composed of lists compiled by the *US Environmental Protection Agency* and the *State of California* Equivalency lists. This category includes National Priority List sites, RCRA Corrective Actions by the *EPA* and *USEPA* permitted treatment, storage and disposal facilities within a one-mile radius of the subject property. This includes sites for designation under the Federal SUPERFUND Program, permitted solid waste landfills, incinerator sites or transfer stations and the State Bond Program for sites representing an environmental concern for the discharge of hazardous wastes.

There are no Category One sites listed as being within a one-mile radius of the subject property as of the date of this report.

**CATEGORY TWO: (½ mile) LUST, DEED RSTR, TOXIC PITS, CORTESE,**

The sites within this category include sites selected for possible placement on the Federal NPL list or the State risks to human health and the environment. This category also includes leaking underground tank sites from both the *Regional Water Quality Control Board* and the State mandated CORTESE lists of properties with hazardous wastes, sites with DEED restrictions and Toxic Pits Cleanup facilities. Sites within this category are provided in this list within a one-half mile as of the date of this report, with other DEED restrictions and Toxic Pits sites from 1994 and 1995.

There are five listed Category Three underground tank sites listed within a one-quarter mile radius of the subject property. The subject property is not listed LUST site. The site that is within ¼ mile is Santa Ana Fire Station 6. That site was closed and is not an issue due to actual distance, gradient and status.

None of the offsite Category Two sites are thought to represent a potential problem for migratory contamination to the subject property, based upon their closure or remediation status, distance, topography and a neighborhood review.

**CATEGORY THREE: (1/4 mile) RCRA VIOL, TRIS, UST/AST**

Sites in this list are the result of RCRA enforcement actions, the Toxic release inventory base and registered aboveground or underground tanks. The data bases range from 1994 information for underground tanks as of the date of this report for information concerning RCRA actions and registered aboveground storage tanks.

There are no listed Category Three underground tank sites listed within a one-quarter mile radius of the subject property. The subject property is not a listed UST site.

**CATEGORY FOUR: (1/8 mile) ERNS, GNRTR, SPILLS, RCRA GENERATORS**

ERNS - ERNS is a national database retrieval system of Incident-Notification information as initially reported by any party regarding incidents of reported releases of oil and hazardous substances. The information in this report combines data from the *United States Coast Guard National Response Center* data base with data from

the 10 *EPA* regions. ERNS support the release notification requirements of Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended; Section 311 of the Clean Water Act; and Sections 300.51 and 300.65 of the National Oil and Hazardous Substances Contingency Plan. There are no ERNS sites listed within one-eighth mile of the subject property as of the date of this report.

**RCRA GNRTR** - Sites which generate regulated hazardous waste above a certain quantity are required to use *EPA* identification numbers and are called RCRA sites. An *EPA* identification number does not indicate a problem with a site, but merely that they use or dispose of a minimum quantity of a hazardous waste. There are six RCRA site listed within a one-eighth mile radius of the subject property as of the date of this report. The subject property is not an RCRA site.

**SPILLS** - These sites are on the *State of California* lists as having had spills of regulated hazardous waste as of the date of this report. There are no spill sites listed as of the date of this report.

## **7.0 DISCUSSION OF INVESTIGATION**

Asbestos ASTM 1527-13 Section 13.1.5.1 De-Minimis Condition - The subject property was constructed prior to 1980 and there are presumed friable and non-friable presumed asbestos-containing materials. These are of no current concern. A full asbestos survey is required prior to demolition and can wait until that time.

Pcb ASTM 1527-13 Section 9.4.1.10 De-Minimis Condition - There should not be any Pcb in any of the utility transformers on or near the site, according to SCE.

There are possible fluorescent lights on site suspected of containing a small amount of Pcb in the cooling oil. These are of no current concern. They can be handled during demolition.

Aboveground Storage Tanks ASTM 1527- 13 Section 9.4.4 - The physical site survey did not evidence the existence of aboveground tanks.

Underground Storage Tanks ASTM 1527-13 Section 9.4.1.3 9.4.1.4 & .5 - The physical site survey did not evidence the existence of underground tank formerly or currently.

Air Conditioning & Heating & Cooling 1527-13 Sections 9.4.3.1 - Heating & Cooling is by electrically powered HVAC units. There are no fuel oil tanks on site.

Site & Building Drainage 1527 – 13 Section 9.4.3.3, 7.6 - There were no standing pools of liquid or odors on site, floor drains or sumps. Stormwater drainage was designed into the site.

Wells - Oil, Water, Injection, Irrigation, Abandoned 1527-13- 9.4.4.6 - There are no wells of any type on site nor were any identified adjoining the subject property. See DOGGR section in appendix.



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**Subject Property: 305 N Mountain View Street Santa Ana CA 92703**

Air Emissions - The physical site survey and record research did not evidence any sources of former or current regulated air emissions.

Water Supplies Potable Water ASTM 1527- 13 Section 9.4.1.9 - Discussions with the local Water District evidenced a water supply to the site which meets all of California's Drinking Water Requirements.

Wastewater ASTM 1527-13 Section 9.4.1.10 & 9.4.4.7 - Site observations did not evidence any source of regulated hazardous materials being discharged into the sanitary sewer.

Waste Generation, Storage and Disposal ASTM 1527-13 Section 9.4.1.4.4 & .5 & .6 & .7 - There are no regulated wastes currently being generated, stored or disposed of from the subject.

Pesticides, Herbicides - There was no current use of herbicides or pesticides noted beyond the normal residential and commercial insect and pest control.

Radon - Radon comes from the natural breakdown (radioactive decay) of uranium. The *Environmental Protection Agency (EPA)* estimates that the average soil in the United States contains only about one part per million of uranium. Uranium is found in about 150 minerals including granite, phosphate and shale. Granite is a major concern for the presence of radon, as some deposits have been found to contain extremely high levels of uranium. The area of the subject property does not indicate any large deposits of granite material which would be of concern to test for the presence of radon. Phosphorous is an essential ingredient in chemical fertilizers and comes from phosphate rock. There does not appear to ever have been much fertilizer used around the subject property. According to Mr. David Quinton of the *State Department of Radon*, the chance of radon being a hazard in Southern California is less than 1%.

Lead-Based Paint - Specific testing is required to determine if paint or other materials formerly used in the construction of buildings contained significant levels of lead. These tests are not within the scope of work for this report and no investigation for lead content was, or will be, performed unless agreed to by the property owner as an additional service, incurring additional costs.

Regulatory Actions - No evidence of regulatory actions on the subject property were found in any of the records checked.

Known Site Problems - There are no known site problems.

Regional or Adjacent Problems - There was no direct evidence of regional or adjacent problems found in the records checked that indicated a conclusive impact on the subject property during any of the time periods reviewed.

## **8.0 CONCLUSIONS**

### **8.1 Areas of No Apparent Concern**

There is no concern for current or former migration of contaminants from off-site.

**8.2 Areas of Further Concern**

The physical site survey and record research indicated building materials which can be handled during some future redevelopment.

**9.0 RECOMMENDATIONS**

**9.1 Areas of No Action**

There was no evidence of current hazardous wastes migrating from off-site or on site to cause further concern.

**9.2 Further Investigation**

In this Environmental Professional's Opinion there is no need for further investigation at this time.

**9.3 Performance Statement 1527-13 12.8.1-** We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527 – 13 of 305 N. Mountain Street Santa Ana, CA 92703. Any exceptions to, or deletions from, this practice are described in Section 1 of this report. This assessment has revealed no evidence of a Recognized Environmental Condition (REC) or a Historical Recognized Environmental Condition (HREC). De Minimis Conditions are outside the scope of RECs and HRECs.

**10.0 LIMITATIONS**

This report is intended to satisfy the requirements of a Phase I Environmental Site Audit as outlined in the ASTM 1527- 13, ASTM 2600-15 Standards and the November 2006 EPA "All Appropriate Inquiries" Rule. These standards are intended to define the scope of due diligence necessary in a real estate transaction to provide for the "innocent buyer's defense" under the SARA amendments to CERCLA.

The findings set forth in this Phase I Environmental Site Assessment are strictly limited in time and scope to the date of evaluation(s). Government records searched are limited to the accuracy of the agency prepared lists. The conclusions presented in the report are based solely on the services described therein and not on scientific tasks or procedures beyond the scope of the agreed upon Phase I Environmental Site Assessment. It is hereby acknowledged that, within the scope of this survey, no level of assessment can ensure the real property is completely free of chemicals or toxic substances. This report is intended only for reliance by the client and their lender. No further reliance is intended without written authorization. This public records search was conducted with available Federal, State, County and City agency departments, according to recognized procedures and current availability of records. Conclusions resulting from these searches are solely a result of the same. ***S & S Commercial Environmental Services, Inc.*** assumes no responsibility for events that are not part of these public records.

**Subject Property: 305 N Mountain View Street Santa Ana CA 92703**

Reliance on this Phase I is limited to the Lenders and Borrower to this transaction.

**S&S Commercial Environmental Services, Inc.**

A handwritten signature in black ink, appearing to read 'Stephen A. Quartararo', with a long horizontal flourish extending to the right.

**Stephen A Quartararo, CEO  
Environmental Professional  
Title 40, Code of Federal  
Regulations CFR Part 312.22**

## **11.0 REFERENCES**

### **11.1 Published References**

- 11.1.1 ERS Environmental Report – October 2019
- 11.1.2 Aerial Photograph Review – USGS333
- 11.1.3 Topographic Maps - *USGS*
- 11.1.4 *DOG* Maps/1992 Munger Map Book Division of Oil & Gas  
<http://www.conservation.ca.gov/dog/Pages/Index.aspx>
- 11.1.5 Alquist-Priolo Earthquake Fault Rupture Hazard Special Study Zones
- 11.1.6 California Code of Regulations Title 22 Chapter 30, Regulations for Hazardous Waste Transport and Disposal, *California Highway Patrol*
- 11.1.7 FEDERAL, 29 CFR, Part 1910.120; 40 CFR Part 761, DOT; 49 CFR Parts 172.516; Toxic Substance Control Act
- 11.1.8 <http://www.lapl.org/> Los Angeles Public Library Sanborn Fire Insurance Map Collection
- 11.1.9 CAL EPA Envirostor With Links To Regional Water Quality Control Board <http://www.envirostor.dtsc.ca.gov/public/>  
1 [http://www.epa.gov/swerosps/bf/aai/aai\\_final\\_factsheet.htm](http://www.epa.gov/swerosps/bf/aai/aai_final_factsheet.htm)  
WHAT IS "ALL APPROPRIATE INQUIRIES?"  
"All appropriate inquiries" is the process of evaluating a property's environmental conditions and assessing potential liability for any contamination.

#### **WHY IS EPA ESTABLISHING STANDARDS FOR CONDUCTING ALL APPROPRIATE INQUIRIES?**

The 2002 Brownfields Amendments to CERCLA require EPA to promulgate regulations establishing standards and practices for conducting all appropriate inquiries.

- 11.1.10 Internet Research <http://www.google.com>

### **11.2 Record of Personal Communications**

- |   |               |
|---|---------------|
| 11.1.1 California Water Company   | October 2019  |
| Website <a href="https://www.gswater.com/">https://www.gswater.com/</a> | (800)999-4033 |
| 11.2.2 California Division of Mines and Geology                         | October 2019  |
| Mr. Edward Keisling, Geologist  | (213)620-3560 |
| 11.2.3 California Division of Oil and Gas                               | October 2019  |
| Cerritos Office   |               |
| 11.2.4 Southern California Edison Company                               | October 2019  |
| Ms. Barbara Hauser, Service Planner                                     | (714)592-3718 |

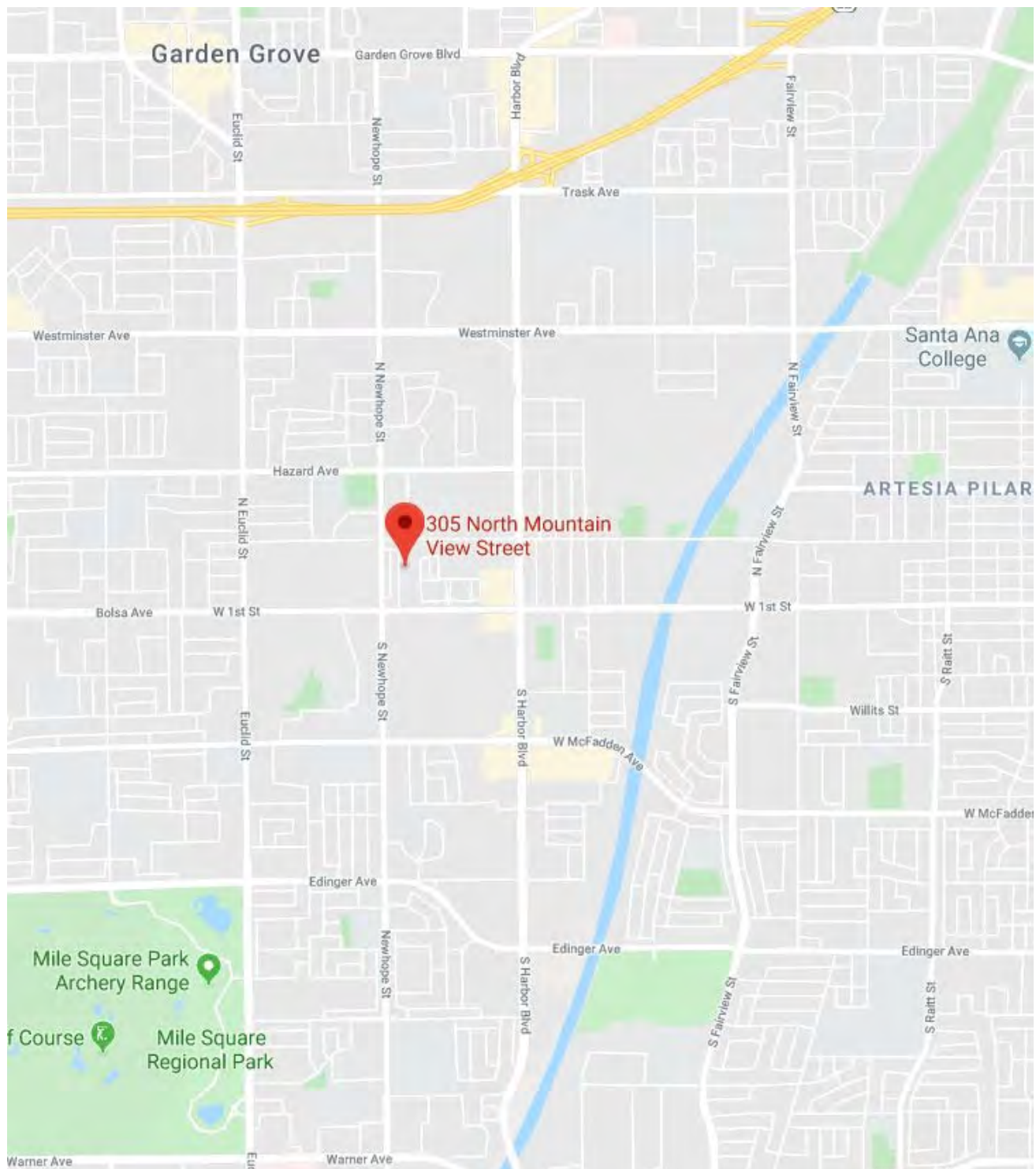
**11.2 Record of Personal Communications (cont.)**

11.2.5	South Coast Air Quality Management District Find Online	October 2019 909.396.2900
11.2.6	State Department of Radon Mr. David Quinton, Env. Health Specialist	February 1996 916.324.1826

## **12.0 APPENDIX**

- 12.1 Site Location Map**
- 12.2 Historical Aerial Photographs & Sanborn Fire Insurance Maps**
- 12.3 USGS Topographic Map of Site**
- 12.4 Environmental Features**
- 12.5 Licenses & Permits**
- 12.6 Building Permits**
- 12.7 Southcoast Air Quality Management District (SCAQMD)**
- 12.8 DTSC Map & Local Sites**
- 12.9 DOGGR Map Section**
- 12.10 City Directories**
- 12.11 Tier I Vapor Encroachment Screening (VES)**
- 12.12 Oil and Gas Wells Within 1500 feet**
- 12.13 Letter from Magnetek**
- 12.14 Certification**
- 12.15 Resume**
- 12.16 ERS Environmental Report**

## **12.1 Site Location Map**





## **12.2 Historical Aerial Photographs & Sanborn Fire Insurance Map**



---

**Subject Site:**

Client's Project #: undefined  
SiteName: undefined  
Address: 305 N Mountain View  
City, State Zip: , Santa Ana, CA

ERS Order #:  
90130

**Prepared For:**

Name: Stephen Quartararo  
Company: S&S Commercial Environmental  
Address: Services, Inc.  
City, State Zip: 16725 Birchwood Lane  
Fontana, CA 92336

Date:  
October 25, 2019

---

## Historical Fire Insurance Map Search Result:

A search of multiple national collections and indexes of historical fire insurance maps was conducted for the above referenced site address. The review of collections and indexes has determined that no historical fire insurance maps are available within these collections and indexes for the referenced site; therefore they are not available and are considered not "reasonably ascertainable" according to ASTM standards. Environmental Record Search (ERS) certifies that a thorough search of our holdings, various other collections and indexes has been completed.

Thank you for selecting ERS.

**Researched by:**

Eric Charles Exton



1938





1953



1963





1972



1985



1994





2003



2007



2015



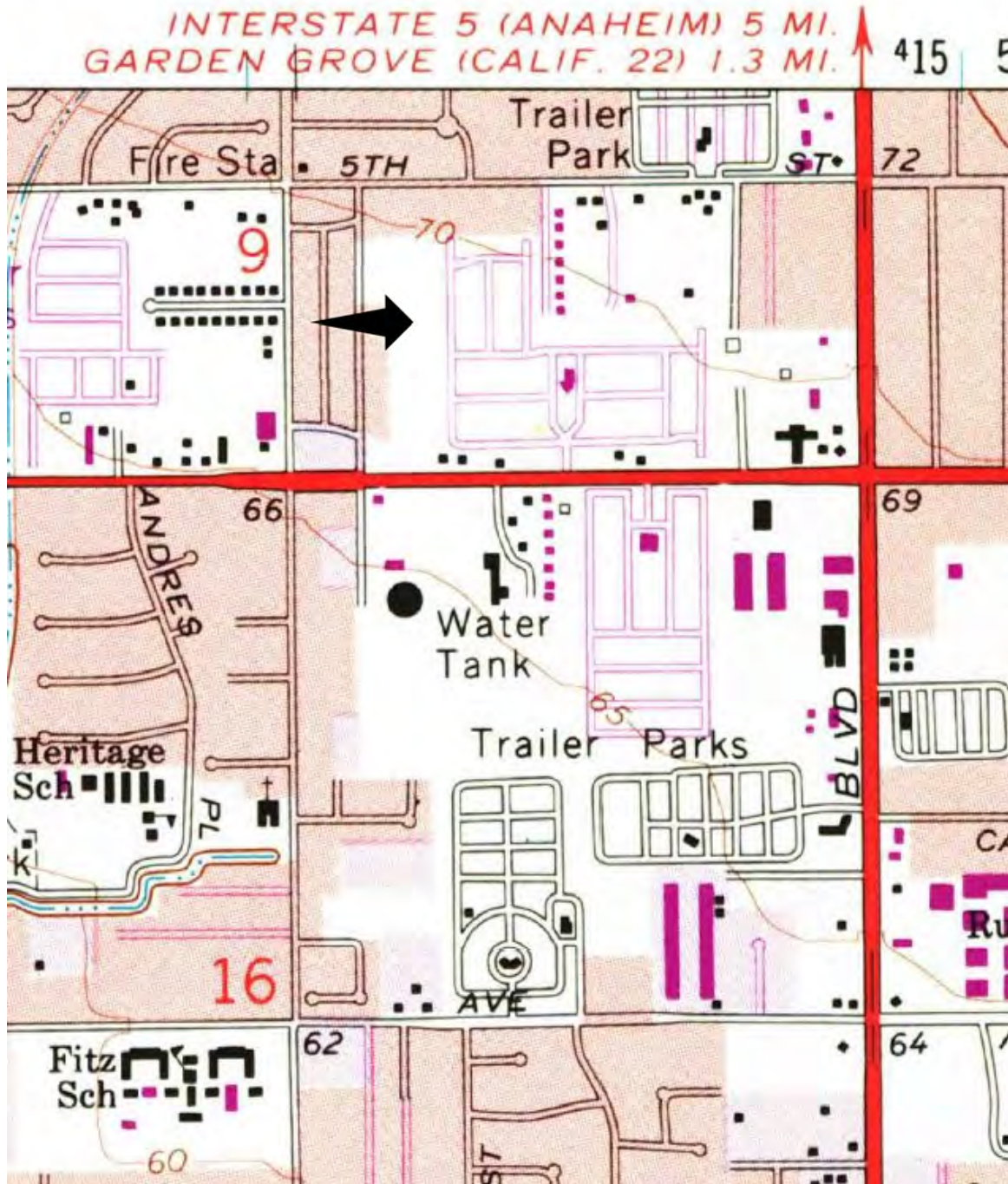


2019

### **12.3 USGS Topographic Map of Site**



## SOURCES



1963 to 1984 Newport Beach 7.5 Minute USGS Topographic Map  
Purple Signifies Buildings Constructed between 1962 and 1983 Dates of Photography

## **12.4 Environmental Features**



**North  
Residential  
Building On  
Subject  
Property**

**North Residential Building On Subject Property**



**Front Yard**





**Rear Of Southeast Structure On Subject Property**



**Recreational Vehicle Parked On Property**





**East Side Of Subject Property**



**East Side Of Subject Property**





**West – Residential**



**East – Mobile Home Park**





**North – Multi Family Residential**



**South – Multi Family Residential**

## **12.5 Building Permits**

## TRACT

## TRACT

216

LOT 5

25

165'

162

247

**300.**

0.745 AC

(40)

LOT

PROJECT 930-33  
419-432

300.35

300. 41'

300-34'

300.37'

LOT 3

281



**108.**

NO. 12117

108

PAR. 1

**PAR.2**

**PAR. 3**

135.45'

P.	M.
----	----

40-12

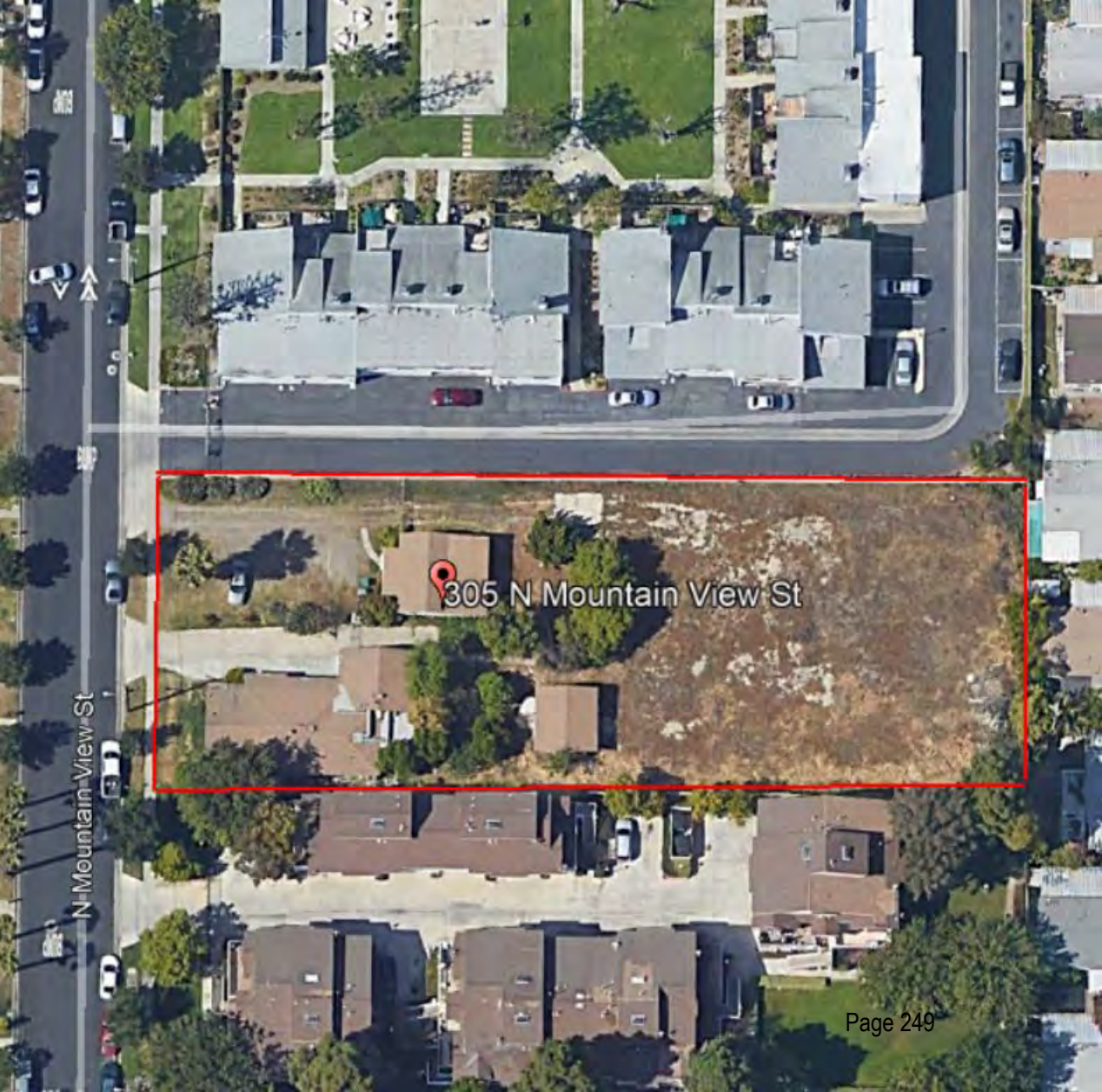
601

52

501

0. 10331





305 N Mountain View St

# Property Profile

## Property Data

Site Address:

305 N Mountain View St  
Santa Ana, CA 92703

Mail Address:

8821 Seaspray Dr  
Huntington Beach, CA 92646

Primary Owner: MOUNTAINVIEW REAL ESTATE INVESTMENTS LLC,

Secondary Owner:

APN: 100-281-05

Census Tract: 0890.04

Housing Tract  
Number: 978

Legal Description: LOT:3 TR#:978 N TR 978 BLK LOT 3

Subdivision:

Property County: Orange County

## Property Characteristics

Bedrooms: 3

Year Built: 1960

Square Feet: 1220

Bathrooms: 2

Use Code: Single Family Residential

Lot Size: 32507 Sqft

Total Rooms: 6

Number of Units: 0

Garage:

Zoning:

Amenities:

Number of Stories: 1

Building Style:

Coords: 33.747136,-117.927134

## Sale & Loan Information

Transfer Date: 07/20/2018

Seller: BUI, LINH; BUI, KRISTINE

Document: 2018000266921

Transfer Value: \$0.00

Cost/Sq Feet: 0

Title Company: None Available

First Loan Amt: \$0.00

Lender:

## Assessed & Tax Information

Assessed Value: \$1,445,000.00

Percent Improvement: 0.0473

Homeowner Exemption:

Land Value: \$1,376,679.00

Tax Amount: \$16,591.50

Tax Rate Area: 11-076

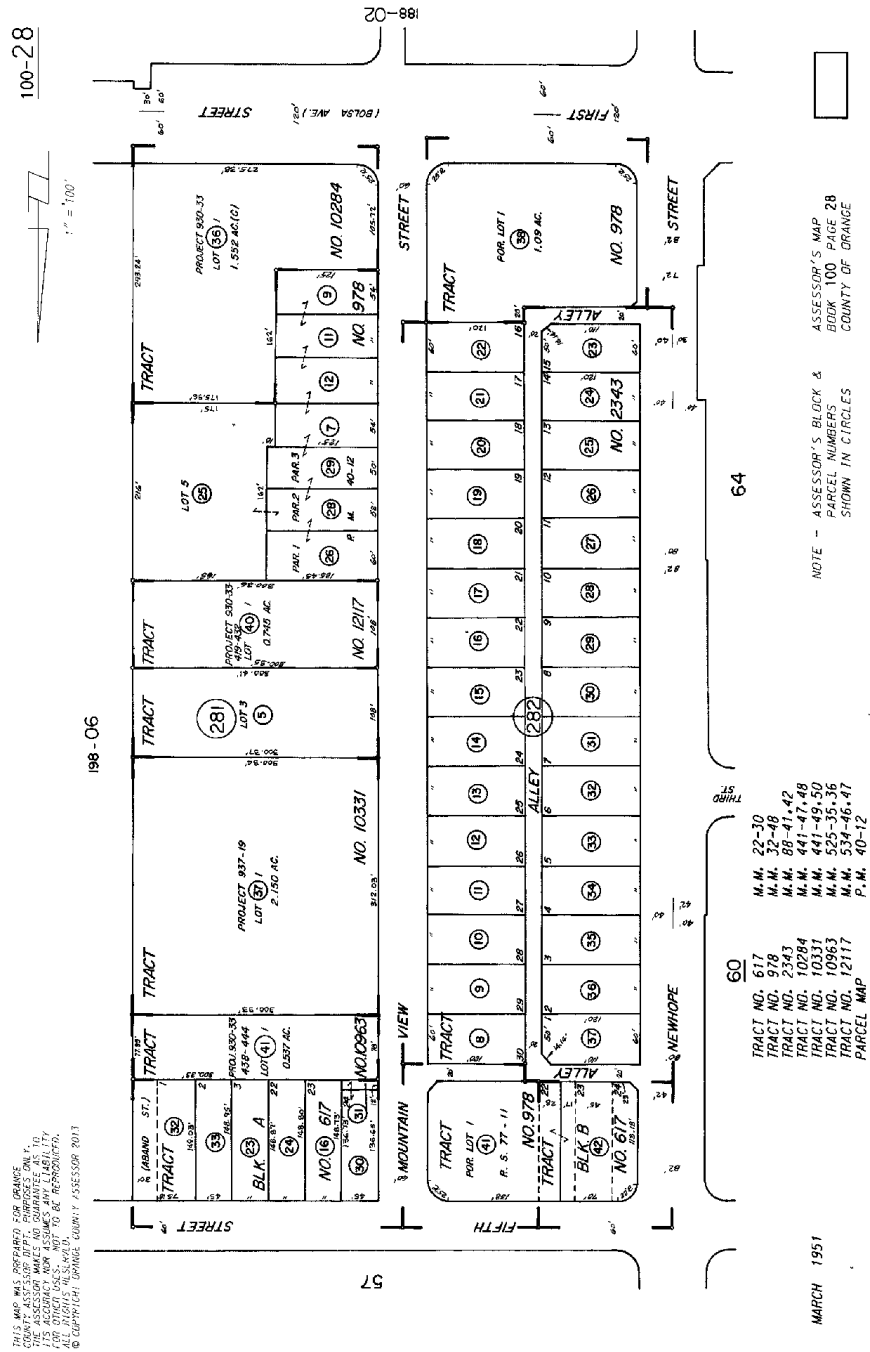
Improvement Value: \$68,321.00

Tax Status: Current

This informational product is being furnished free of charge as a customer service by Orange Coast Title Company (OCT) in conformance with the rules established by the California Department of Insurance. The information contained herein as well as any accompanying documents is not a full representation of the status of title to the property in question. The issuance of this information does not constitute a contract to issue a policy of title insurance on these same terms, neither express or implied. While the information contained herein is believed to be accurate, no liability is assumed by OCT either in contract, tort or otherwise for any error or omission contained herein and this information may not be relied upon in the acquisition or in any loan made on property by the recipient of this information without the issuance of a policy of title insurance.



# Plat Map



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# Property History

## Property History for 305 N Mountain View St Santa Ana, CA 92703

Item1 - Transaction Date: 07/20/2018

### Transfer

APN: 100-281-05  
Buyer/Borrower: MOUNTAINVIEW REAL ESTATE INVESTMENTS LLC  
Seller: BUI, LINH; BUI, KRISTINE  
Title Company  
Transaction Value: \$0.00  
Transaction Type: Transfer  
Deed Type: Grant Deed  
Doc #: 2018000266921

Item2 - Transaction Date: 11/08/2017

### Transfer

APN: 100-281-05  
Buyer/Borrower: BUI, LINH; BUI, KRISTINA  
Seller: NGON TIEN GROUP  
Title Company  
Transaction Value: \$1,445,000.00  
Transaction Type: Transfer  
Deed Type: Grant Deed  
Doc #: 2017000475180

Item3 - Transaction Date: 02/03/2017

### Transfer

APN: 100-281-05  
Buyer/Borrower: NGOC TIEN GROUP COMPANY INC  
Seller: PHAN, VU NGUYEN  
Title Company  
Transaction Value: \$1,245,000.00  
Transaction Type: Transfer  
Deed Type: Grant Deed  
Doc #: 2017000050189

(cont)

# Property History

Item4 - Transaction Date: 03/17/2015

## Transfer

APN: 100-281-05

Buyer/Borrower: PHAN, VU NGUYEN

Seller: CUCOVATZ, LARRY R; JAMES E  
MARTIN TRUST

Title Company

Transaction Value: \$1,000,000.00

Transaction Type: Transfer

Deed Type: Grant Deed

Doc #: 2015000137105

Item5 - Transaction Date: 12/12/2011

## Transfer

APN: 100-281-05

Buyer/Borrower: MARTIN, JAMES E; JAMES E  
MARTIN TRUST

Seller: MARTIN, JAMES EDWARD;  
CUCOVATZ, JAMES EDWARD

Title Company

Transaction Value: \$0.00

Transaction Type: Transfer

Deed Type: Intra-family Transfer or Dissolution

Doc #: 2011000647742

Item6 - Transaction Date: 04/09/1998

## Transfer

APN: 100-281-05

Buyer/Borrower: MARTIN, JAMES EDWARD;  
CUCOVATZ, JAMES EDWARD

Seller: CUCOVATZ PAUL C; KINNEY,  
JEANNE

Title Company

Transaction Value: \$0.00

Transaction Type: Transfer

Deed Type: Gift Deed

Doc #: 19980211263

(cont)


# Property History

This informational product is being furnished free of charge as a customer service by Orange Coast Title Company (OCT) in conformance with the rules established by the California Department of Insurance. The information contained herein as well as any accompanying documents is not a full representation of the status of title to the property in question. The issuance of this information does not constitute a contract to issue a policy of title insurance on these same terms, neither express or implied. While the information contained herein is believed to be accurate, no liability is assumed by OCT either in contract, tort or otherwise for any error or omission contained herein and this information may not be relied upon in the acquisition or in any loan made on property by the recipient of this information without the issuance of a policy of title insurance.

## **12.6 Southcoast Air Quality Management District (SCAQMD)**

**Subject Property: 305 N Mountain View Street Santa Ana CA 92703**

Street	City	Zip	<input type="checkbox"/> RECLAIM	<input type="checkbox"/> TITLE V
Mountain View	Santa Ana	92703		



### SEARCH RESULTS


Street: Mountain View

City: Santa Ana

Zip: 92703

Clear all Filters

There are no facilities that match your search criteria. If you think this result is incorrect, call the number below.



South Coast Air Quality Management District  
21865 Copley Dr, Diamond Bar, CA 91765  
909-396-2000

**South Coast  
AQMD**

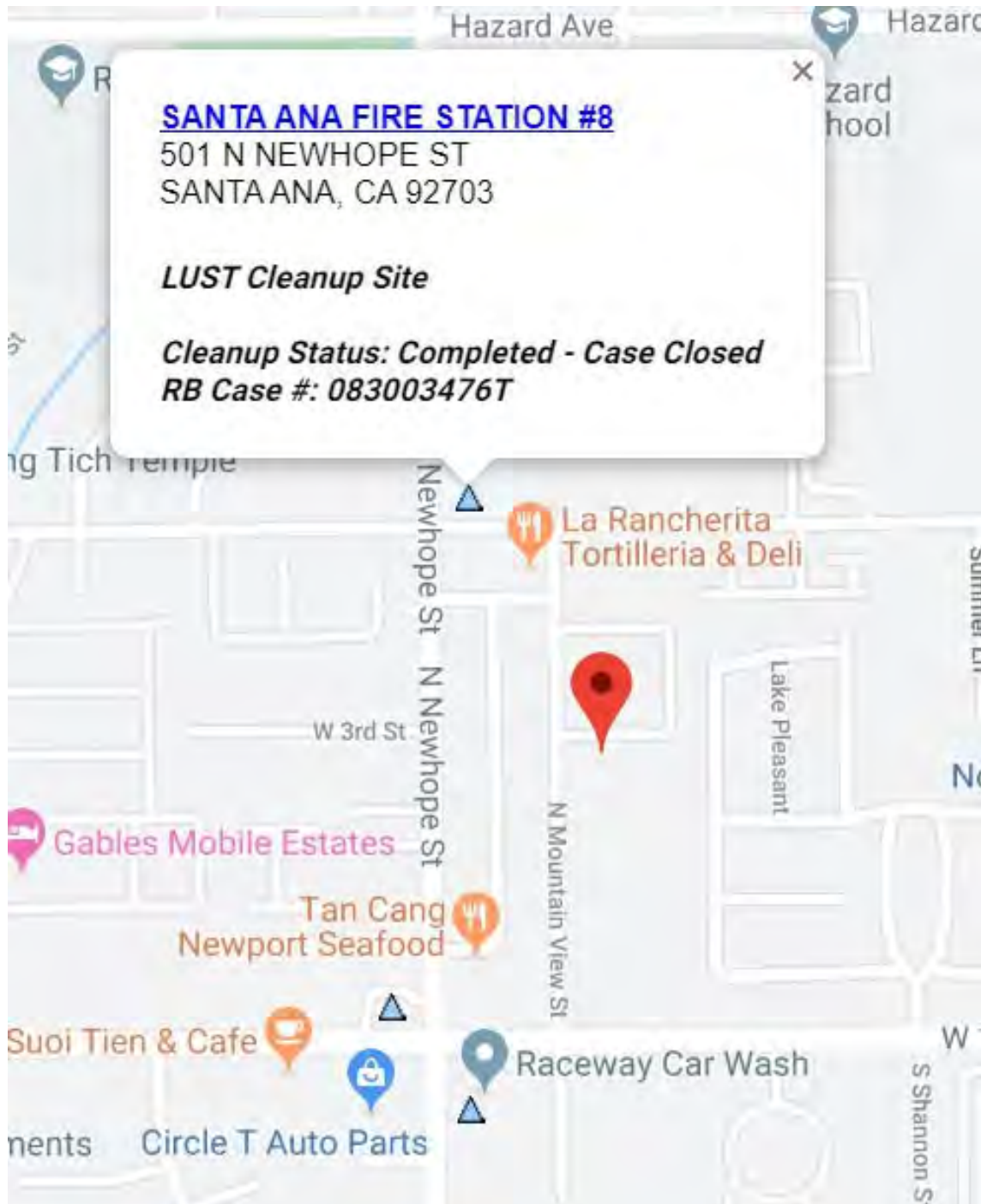
© 2018 South Coast Air Quality Management District

Questions/Need

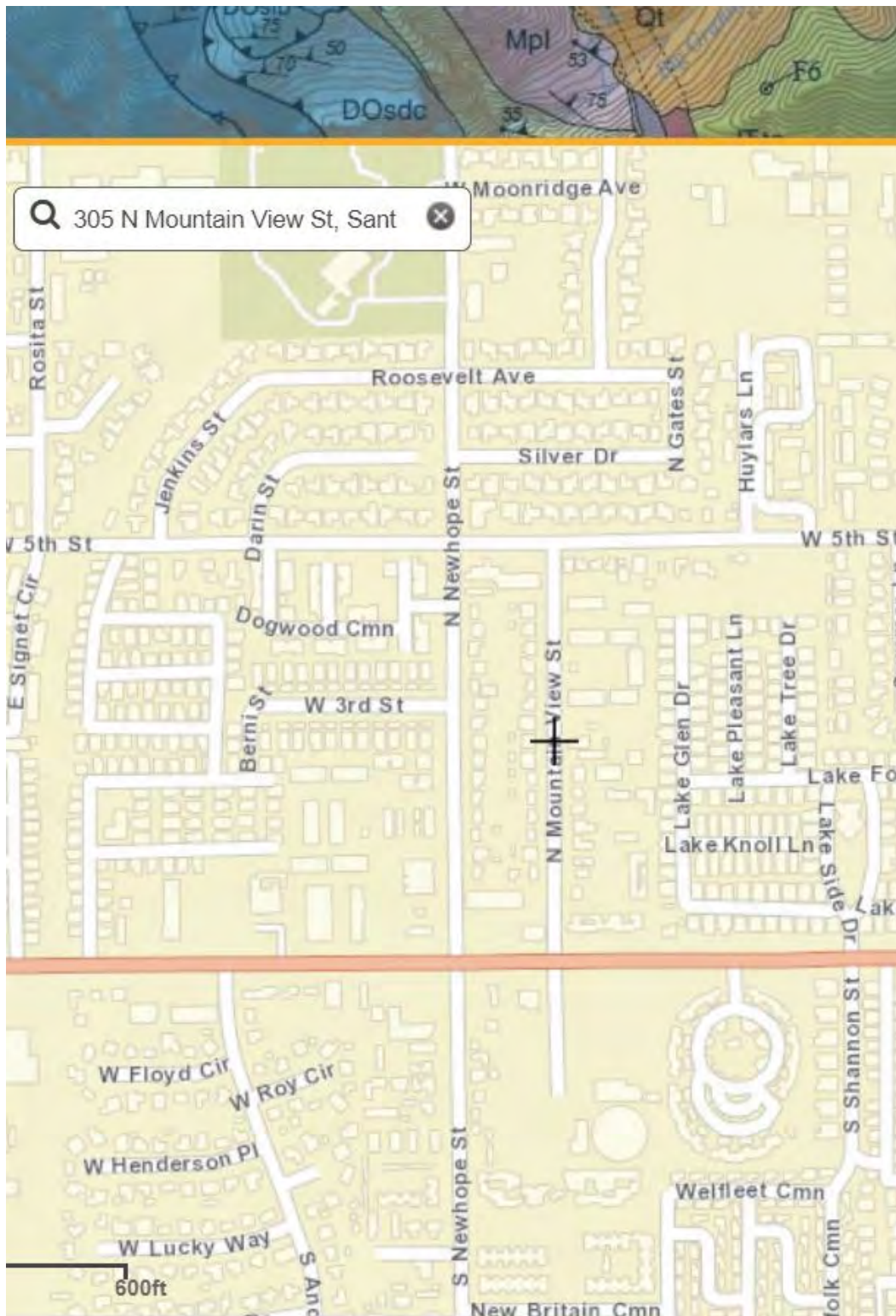
## **12.8 DTSC Map & Local Sites**







## **12.9 DOGGR Map Section**



**No Oil Wells**

## **12. 10 City Directories**

**City Directories Not Considered Necessary For This Report Based Upon Known Uses**

### **12.11 Tier I Vapor Encroachment Screening (VES)**

# TIER I VAPOR ENCHROACHMENT SCREENING (VES) Conducted As Part of Phase I ESA

## E2600 – 15

PROJECT NAME:

QUESTIONNAIRE COMPLETED BY: S&S Commercial Environmental Services, Inc.

PROPERTY ADDRESS: 305 N. Mountain View Street  
Santa Ana, CA 92703

NAME: Stephen A. Quartararo  
TITLE: C.E.O., Environmental Professional CFR Title 40 Section 412.22  
ADDRESS: 16725 Birchwood Ln CITY/STATE/ZIP: Fontana, CA 92336  
TELEPHONE: (949)650-4994 EMAIL ADDRESS: s.quart@att.net

UNITS: 1

DATE OF RESPONSE :10-27-20

- |    |   |   |  |   |
|----|---|---|--|---|
| 1  | Property type   | <input type="checkbox"/> Commercial   | <input type="checkbox"/> Industrial    | <input checked="" type="checkbox"/> Multi-Tenant <input type="checkbox"/> Vacant Land <input checked="" type="checkbox"/> Res |
| 2  | Are there any buildings/ structures on the property?  | Yes <input checked="" type="checkbox"/>   | No <input type="checkbox"/>            | Unknown <input type="checkbox"/>  |
| 3  | Will buildings/structures be constructed on the property in the future?   | If yes, type construction <u>Wood Frame and Stucco</u><br>Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>  |  |   |
| 4  | If buildings exist or are proposed, do/will they have   | If yes, type construction _____<br>Yes <input type="checkbox"/> Hydraulic      No <input checked="" type="checkbox"/>   |  |   |
| 5  | elevators? Type of level below grade (existing)   | <input type="checkbox"/> Full Basement  | <input type="checkbox"/> Crawl Space   | <input checked="" type="checkbox"/> Slab on Grade   |
| 6  | Ventilation in level below grade?   | <input type="checkbox"/> Parking Garage   | <input type="checkbox"/> Multi-level   | Unknown <input type="checkbox"/>  |
| 7  | Sump pumps, floor drains, or trenches (existing) Radon or   | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 8  | methane mitigation system installed? Not Needed   | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 9  | Heating system type (existing)  | (CHECK ALL THAT APPLY)<br><input type="checkbox"/> Hot Air Circulation <input type="checkbox"/> Electric Baseboard<br><input type="checkbox"/> Hot Air Radiation <input checked="" type="checkbox"/> Heat Pump<br><input type="checkbox"/> Hot Water Radiation <input type="checkbox"/> Wood Stove<br><input type="checkbox"/> Kerosene Heater <input type="checkbox"/> Steam Radiation<br><input type="checkbox"/> Fireplace <input type="checkbox"/> Coal Furnace<br><input type="checkbox"/> Radiant Floor Heat <input type="checkbox"/> Hot Water Circulation<br><input type="checkbox"/> Fuel Oil Furnace <input type="checkbox"/> Gas Furnace<br><input type="checkbox"/> Other |  |   |
| 10 | Type of fuel energy (existing or proposed)?   | (CHECK ALL THAT APPLY)<br><input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Electric<br>Propane <input type="checkbox"/> Kerosene <input type="checkbox"/> Fuel Oil<br>Coal <input type="checkbox"/> Wood<br><input type="checkbox"/> Other <input checked="" type="checkbox"/> Solar  |  |   |
| 11 | Have there ever been any environmental problems at the property?  | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 12 | Does/was/will a gas station or dry cleaner operate anywhere on the property?  | If yes, describe _____<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>  |  |   |
| 13 | Do any tenants use hazardous chemicals in relatively large quantities on the property?  | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 14 | Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?                          | If yes, describe _____<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>  |  |   |
| 15 | Are the operations (or proposed operations to be performed) on the property   | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 16 | Were/Are there any existing or proposed underground storage tanks (USTs) or above ground storage tanks (ASTs)?  | Yes <input checked="" type="checkbox"/>   | No <input type="checkbox"/>            | Unknown <input type="checkbox"/>  |
| 17 | Are there any sensitive receptors (for example, children, elderly, people in poor health, and so forth) that occupy or will occupy the property? Senior Citizens Apartment's? | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 18 | Is property a collection of parcels tied together for current use?  | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 19 | Where there any uses identified in Phase I research on the subject or adjoining properties which used chemical formulations considered Chemicals of Concern (COC)             | Yes <input checked="" type="checkbox"/>   | No <input type="checkbox"/>            | Unknown <input type="checkbox"/>  |
| 20 | If COC were identified, is COC use continuing on the property?  | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 21 | If COC were identified on the adjoining properties, continuing?   | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 22 | If COC were identified, was/is their use significant?   | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |
| 23 | If COC use was/is significant is/was there mitigation? Explain - see below  | Yes <input type="checkbox"/>  | No <input type="checkbox"/> -          | Unknown <input type="checkbox"/>  |
| 24 | Is a source of vapor within 100 feet of TP - Encroachment Condition   | Yes <input type="checkbox"/>  | No <input type="checkbox"/>            | Unknown <input checked="" type="checkbox"/>   |
| 25 | Does Tier I Phase I or HUD 4128 Screening Indicate Need for Tier 2  | Yes <input type="checkbox"/>  | No <input checked="" type="checkbox"/> | Unknown <input type="checkbox"/>  |

Subject Property is residential .and has always been residential

This list is a voluntary checklist to determine if a VEC is identified for the Target Property (TP) (that is, the presence or likely presence of COC vapors in the vadose zone of the TP caused by the release of vapors from contaminated soil and/or groundwater either on or near the TP

ASTM defines the term "Vapor Encroachment Condition" - presence or likely presence of "chemical of concern" vapors in the subsurface of the Target Property caused by the release of vapors from contaminated soil or groundwater or both either on or near the Target Property as identified by the Tier 1 or Tier 2 procedures.

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**12.12 Letter from Magnetek**



The following is a reprint of:

*MagneTek  
Universal Manufacturing*

200 Robin Road  
Paramus, NJ 07652  
Phone (201) 967-7600  
TELEX 753330  
Fax (201) 967-0904

-----  
Mailing Address  
P.O. Box 3028  
Paterson, NJ 07509

RE: PCB's

Ballasts are used in fluorescent fixtures in business, commercial and industrial establishments, as well as in schools. One of the devices used in these ballasts is called a capacitor, which makes the ballasts operate more efficiently. These capacitors, used in ballasts made by every manufacturer in the industry, including Universal, used PCBs in small amounts until 1978, when a change was made to another liquid. Universal ballasts manufactured since January 1979 do not contain PCBs and the label of all these ballasts contain the statement "No PCB's".

The capacitor is a hermetically sealed device, which entirely isolates the PCB from human contact. The typical fluorescent ballast contained about 0.05 lbs. of 100% PCB liquid. That represents 1-2 liquid ounces. The weight of PCB used in relationship to the total capacitor weight, was approximately 15%. In relationship to the total ballast weight it varied from 0.6% (Slimline ballasts) to 1.5% (2 lamp, 40 watt ballasts). The degree of chlorination was 42%.

For HID ballasts where larger capacitors were used, it may have been as much as 5-6 ounces of liquid. In all cases the amount of "free PCBs" (the quantity that could leak if the can ruptured), was much less because most of the liquid was absorbed by the blotter-like dielectric material.

Ballasts occasionally fail in service and sometimes the asphalt (tar) with which they are filled melts and leaks out. On very rare occasions, the capacitor will also rupture and its contents mix with the tar. If a leak occurs, it should be cleaned up with any petroleum-based solvent.

MagneTek Universal Mfg.

Page 2

Such a leak does not represent any significant immediate or long-term hazard. The United States Environmental Protection Agency has recognized the existence of PCBs in ballasts, has carefully evaluated the situation and in the regulations controlling the use and disposal of PCBs has concluded that continued use in existing lighting installations is acceptable; also that the occasional ballasts which becomes defective in service may be disposed of in compliance with 40 CFR\* Part 761 or check with your local State Environmental Protection Agency for instruction.

Should you have any questions regarding this matter, please do not hesitate to call me at your convenience.

Very truly yours,

MagneTek Universal Manufacturing

Robert E. Babcock  
Manager, Marketing Engineering

REB:cp

\* Code of Federal Regulations

## **12.13 Certification**

## **ENVIRONMENTAL PROFESSIONAL CERTIFICATION**

I, Stephen A. Quartararo declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in Section 312.10 of this part [40CFR Part 312].

I have the specific qualifications based upon education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

**S&S Commercial Environmental Services, Inc.**

A handwritten signature in black ink, appearing to read 'Stephen A. Quartararo', with a long horizontal flourish extending to the right.

**Stephen A Quartararo, CEO  
Environmental Professional  
Title 40, Code of Federal  
Regulations CFR Part 312.22**

## **12.14 Resume**

## RESUME

**STEPHEN A. QUARTARARO** <http://www.phase1reports.com>

Environmental Professional, CFR Title 40 Code of Federal Regulations Section 312.22, ASTM-1527-2013, ASTM 2600-15, CA 2010 CHHSLs, CA HERO 2018, SBA 1-1-18, HUD 2018

**Owner S&S Commercial Environmental Services, Inc.** since formation 1997. General Engineering Contractor A Hazardous Materials Certified, General Building Contractor B, Insulation and Acoustical C-2, Asbestos Certified, Water Well Drilling Contractor C-57. CA Real Estate Brokers Licenses/MLS Endorsement  
Life & Health Insurance License (former).

**Phase I Site Surveys, Phase II Soil and Groundwater Investigations, Phase III Remediation of Soil and Groundwater** leading to No Further Action or Closure by Local, County, State and Federal Agencies. Environmental Hazard Assessment, Project Cost to Cure Physical Deterioration, Construction Management, Environmental Site Appraisals. Storm and Irrigation Water Conservation, Re-use.

Coordinator- Oil Well Re-abandonment Signal Hill, CA 2009 - Valencia, California Site in 2006.

### Recent Projects

June 2017 - Closure Investigation after nine years Under Regional Water Quality Board Oversight including 2 groundwater monitoring wells in City Sidewalk Long Beach CA.

May 2017 - Investigation - Remediation of Gas Station in Calexico, CA under Regional Water Quality Board Oversight.

December 2016 - Facilitator with LA County Fire Department Site Mitigation Unit and General Engineering Contractor for Closure of 3.5-acre industrial property in Carson, CA over a five-year period. Removal of PCE Vapor in three major areas to 45 feet. Removal and off haul of 30 = twenty-four-ton truckloads of gasoline and diesel, pce and tce contaminated waste under over site of LA County Fire Department Site Mitigation Unit in a final remediation of source. Closure of minimally contaminated groundwater at 58 feet as non-beneficial water attenuating naturally.

March 2016 - Facilitator for No Further Action (NFA) Closure Letter for Soil, Soil Vapor and Groundwater for large light industrial property in Carson, CA after four years of testing and remediation. Relieved Owner from further quarterly monitoring and remediation of groundwater under NFA property by proving that the contamination was from an off-site VOC contaminant source being remediated by Others.

### EXPERIENCE

6,000 plus Phase I site assessments in CA, AL, AZ, AR, NV, NY and TN.

100's of Phase II and Phase III site investigations and closures in CA.

42 years as asbestos and environmental consultant and abatement contractor direct and subcontract. 20 of those years as owner of an Environmental Company, 19 as a General Engineering Contractor with Hazardous Certification and 3 of those years with related storm and irrigation water conservation related companies.

Professional cost estimation, third party verification of sampling activities, underground tank removal monitoring and property assessment consultant for soil and groundwater.

Coordinator of design and construction in two Los Angeles high rise office buildings for fire safety retrofit under the City of Los Angeles fire life safety ordinance.

Develop and Design of Affordable Housing, including site selection, negotiation, planning and permit process and funding sourcing.

## **MAJOR CONTRACTS**

UC Santa Barbara (1979) - HVAC system cleaning of five-story Chemistry and Physical Sciences buildings on campus.

VA Medical Center LA Jolla (1980) - After-fire decontamination of Surgery Floor HVAC.

TRW (1983) - Bulk materials sampling for asbestos in 65-building facility, Redondo Beach, CA.

UC Chancellors Office, UC San Francisco Medical Center (1984) - Survey design, field work completion, report design, report completion for UC Chancellor's office's funding request to State Assembly funding for asbestos abatement and management - 103 buildings - hospital, classrooms, administrative offices.

California Hospital Medical Center (1983) - Contract and specification design and completion of asbestos abatement projects.

County of Los Angeles (1984) - Approval of specifications, third party monitoring of contractor during Building 5 Asbestos Abatement Project at Rancho Los Amigos Medical Center.

JMB Property Management (1985) - Coordination as part of Pacific Abatement Group with building management and Med Tox abatement and hygiene personnel on 3 stories of asbestos containment project in 25 story high rise office building, Century City, CA.

UC Riverside (1985) - Asbestos management and control in utility tunnels under campus.

Tishman Construction (1985) - Area containment for electrical work adjacent to occupied areas in asbestos affected Bank of America offices at ARCO Towers, Los Angeles, CA.

Equitable Real Estate Investment Management (1986) - Asbestos abatement and containment projects, including elevator lobby doors, full floor abatement and after-fire decontamination projects in former First Interstate Bank and Union Bank buildings, Los Angeles, CA.

Baxter Pharmaceutical (1988) - Building materials sampling for asbestos and reports for 14 buildings in seven Midwest States.

Fremont Indemnity (1991) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 11-story office building in midtown Los Angeles. Included removal of underground diesel tank.

Redlands Federal Savings (1990) - Phase I Environmental Assessments of raw land in Inland Empire and San Diego areas of Southern California.

SPS Technologies (1993) - "Qualified Risk Assessment"(QRA) for sale of existing 20-acre site in Costa Mesa, CA: Work involved review of commercial appraisals, Environmental Site Remediation work completed, further remediation cost proposals, interviews with responsible

government agencies, interviews with banking authorities, preparation of report detailing current conditions and value of property less expected remediation costs, results of interviews with regulatory agencies and financial authorities, four scenarios under which the property might be sold and the anticipated financial return and liability concerns of each scenario.

Money Store Investment Corporation (from 1992 until sold) - Related - 400+ Phase I

Environmental Assessments of commercial property as collateral for SBA backed commercial loans in California.

First Union/Wachovia - Successors to Money Store Investment Corporation, Then Wells Fargo Coast Federal Savings (Former- early 1990's) - 300+ Phase I Environmental Assessments and Asbestos Inspections of residential apartment buildings, commercial shopping centers and other commercial buildings from San Diego to San Francisco and Sacramento to New York State.

Chevron Real Estate Services (1991) - Coordination and management of gasoline contaminated soil remediation project in Blythe, CA; work included shoring to 30 feet along the western perimeter of project to protect adjacent restaurant, removal and bio-remediation of 3,500 cubic feet of contaminated soil, removal of 5,000 gallons of contaminated water, placement of filter over local groundwater, back filling of excavation with remediated soil.

Carlsberg Management Company (1989-1995) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 10-story office building in West Los Angeles.

Owner's representative: work included selection and coordination of architect, mechanical, electrical, fire sprinkler, asbestos abatement/containment and industrial hygiene contractors and interface with the City of Los Angeles Building, Electrical and Structural Departments and Inspectors over a five-year period under occupied and vacant building conditions.

California Federal Bank (1993) - Phase I Environmental Assessments and Asbestos Inspections of commercial and residential buildings in Northern and Southern California.

Folger & Levin, Law Firm (1995) - "Environmental Risk Assessment" (ERA) for 3-acre parcel in West Los Angeles. Review of six environmental soil and groundwater studies, practical expansion of research and coordinated explanation of real environmental issues for use by commercial property appraiser.

State Farm Insurance Company (1995) - Asbestos expert for client negotiations.

Berger, Kahn, Shafton, Moss, Figler, Simon & Gladstone (1996/1997) - Asbestos expert witness.

Prestholt, Kleeger, Fidone & Villasenor (1996) - Asbestos expert witness.

S&S Commercial Environmental Services (1997 - Present) - Phase I Site Assessments and Miscellaneous Independent Project Management and General Engineering Contractor for soil and groundwater sampling and remediation leading to site closure letter from County and City Fire Departments, Health Departments and CA Regional Water Boards ranging from thousands to hundreds of thousands of dollars. Oil Well Re-abandonment.

Bank of America - Related - Phase I Environmental Assessments Southern California.

Wells Fargo Bank - Phase I Environmental Assessments and Asbestos Inspections in California for Standard and SBA backed RE property loans. (Successor To Wachovia Bank - SBA Division)

Chase Bank - Phase I Site Assessments

First Foundation Bank - Phase I Environmental Site Assessments & Phase I Reviews, Phase II Site Investigations. California and Nevada

Standard Life Insurance Company - Phase I Site Assessments

Metropolitan Life Insurance Company - Phase I Site Assessments



Textron Financial - Heritage Golf Group - 127 Acre Golf Course Santa Clarita - Phase I  
Blue Green Preservation - Phase I and Phase II Site Assessments HUD Senior Housing  
California, Alabama, Tennessee, Arkansas  
Miscellaneous Independent Cost Estimation for required remediation of contaminated sites with  
commercial and industrial property appraisers.

## **EDUCATION**

B.S. Urban Environmental Management; Cal State University Dominguez Hills  
J.D. Candidate Classes in Torts, Contracts, Criminal Law, Legal Writing; Western State  
University, Southern California College of Law  
Major Emphasis - Tort Theory and the implications to modern environmental contamination and  
clean-up problems.  
"Low Risk Closure Guidelines" - California Regional Water Quality Board - Los Angeles  
Region Seminar June 1996.  
Miscellaneous Classes provided by State Agencies in past twenty years and job site discussion  
regarding water quality standards and remediation with Regulators for Closure.  
California Storm Water Association (CASQA - Member and participation as vendor  
representing OSORB as Absorb Concentrate & Eliminate (AC&E San Diego August 2012.  
Member and participation as vendor representing ASRE (Advanced Stormwater Recovery &  
Engineering Garden Grove September 2014.

## **LICENSES**

California A General Engineering Contractor, Hazardous Materials Certified  
California B General Building Contractor  
California C-2 Contractors License, Asbestos Certified  
California C-57 Water Well Driller  
California Real Estate Broker  
CA Life & Health Agent (former)

Current & Former

## **CERTIFICATIONS**

Certified Asbestos Consultant (CAC, State of California  
EPA/AHERA Competent Person, Supervisor/ Management Planner/Project Designer  
Hazwhopper 48 Hour OSHA Certified Field Supervisor  
Certified Professional Estimator (CPE) Lead Abatement Supervisor

## **REGISTRATIONS**

Registered Environmental Assessor (REA)  
Registered Property Manager (RPM)

## **AFFILIATIONS**

American Society of Professional Estimators (ASPE)  
California Society of Real Estate Appraisers (CSOREA)  
American Institute of Plant Engineers (AIPE)  
California Society of Hospital Engineers (CSHE)  
National Society of Power Engineers (NSPE)  
Kiwanis International, Greater Anaheim, CA (KIWANIS)

## **PUBLICATIONS**

Industrial Real Estate Association Fall 1997 Newsletter, "The Environmental Report, To Close or Not To Close", 1997

Home Trader Publications, Copyright 1994 - Residential properties for sale or trade. American  
Numerous articles on asbestos in "Asbestos Issues", a nationally published magazine, and the  
"Los Angeles BOMA" magazine.

## **SEMINAR SPEAKER**

IRS (Internal Revenue Service), "Discounted Value of Asbestos and Environmentally Affected Property"

CATL (CA Assoc of Thrift and Loans), "The Effect of Asbestos and Environmental Discounts on Loans"

American Society of Professional Estimators - "The Design and Estimate of an Asbestos Abatement Project"

Los Angeles Board of Realtors, "Asbestos in Homes and Property"

(AIPE) American Institute of Plant Engineers, "Asbestos, History and Challenges" (CSHE)

California Society of Hospital Engineers, "Asbestos, History and Challenges"

(SCACEO) Southern California Association of Code Enforcement Officials "Single Room Occupancy Hotels, History and Modern Operations"

## **TRAINING CLASSES PRESENTED**

8-hour Asbestos Awareness Class presented to:

- \* City of LA Fire Safety Inspectors
- \* Zurn Cosco Supervisors and Workers
- \* Grinnell Fire Protection Supervisors and Workers

## **EDUCATION VIDEOS**

Installation of Fire Sprinkler Hangers within asbestos affected environments, 1986

SROs, The Myth and Reality, 1991

## **DEVELOPMENT DESIGN**

General Partner - 210-unit Single Room Occupancy (SRO residential project in Anaheim, CA.

General Partner - 55-unit Single Room Occupancy (SRO residential project in Santa Ana, CA.

## **EMPLOYMENT HISTORY AND OWNERSHIP**

S & S Commercial Environmental Services, Inc., ASRE, Inc. AC&E, Inc., Enviroprop, Home  
Trader Realty, Inc., Equity Funding Mortgage, NATEC International, Inc., McClelland  
Management Services, National Abatement Corporation, Med-Tox Consultants, Pacific  
Abatement Group, Asbestos

## **12.15 ERS Report**



# RecCheck

The Standard for ASTM/AAI Radius Searches  
(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA AII Appropriate Inquiry)

# Report Results

## REPORT RESULTS



### Site Location:

305 N Mountain View  
, Santa Ana, CA 92703  
(N 33-44-50, W 117-55-38) NAD83

### Client:

S&S Commercial Environmental Services, Inc.

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## EXECUTIVE SUMMARY

### *INFORMATION ON THE REQUESTED LOCATION*

<b>Site Address:</b>	305 N Mountain View , Santa Ana, CA 92703
<b>Client Project Name/Number:</b>	2104714539
<b>Coordinates:</b>	N 33-44-50, W 117-55-38 (NAD 83) 33.747188, -117.92732
<b>Date of Report</b>	October 25, 2019
<b>ERS Project Number:</b>	2104714539
<b>Subject Site Listed on the following lists:</b>	Not Listed
<b>Subject Site Listed as Map ID#:</b>	N/A
<b>USGS 7.5 Minute Quad Map:</b>	Newport Beach (digital) (Date Unavailable)
<b>Subject Site Located within a Potential Area of Concern:</b>	No
<b>Township, Section and Range:</b>	Township: 05S Range: 10W Section: 16 Baseline: San Bernardino
<b>Site Elevation: (feet above or below (-) mean sea level)</b>	71
<b>Flood Zone: (FEMA Q3 Digital Data)</b>	Panel: 06059C0256J, Effective Date: 12/3/2009 Zone A - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
<b>Fire Insurance Map Coverage:</b>	No
<b>Radon Information:</b>	EPA Radon Zone: 3  (Predicted avg for county: < 2 pCi/L) For zip code 92703: Number of tests per zip code: 2 Number of tests where radon is > 4 pCi/L: 0 Percentage of test where radon is > 4 pCi/L: 0.00% Other Information: Not Reported
<b>Search Radius Expansion Size: (In Miles)</b>	0

Soil Type: (USDA Soil Survey Geographic Database) (SSURGO)	Metz loamy sand Map Unit Type: Consociation Hydric: No Drainage Class: Somewhat excessively drained General Information: Sandy, mixed, thermic Typic Xerofluvents
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched
Occurrence Count:	94

## SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">1</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">3</a> , <a href="#">4</a>	342550-PD CALIFORNIA PERFECTION	365 N MOUNTAIN VIEW ST SANTA ANA	Hist-Vehicle-Washing	Listed	0.03 NW	-1
<a href="#">2</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">3</a> , <a href="#">4</a>	CAC002973898 WANDA BROWN	206 NORTH MOUNTAIN VIEW ST SANTA ANA	RCRA-NON-US	Listed	0.05 NW	-1
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10689694 ORANGE COUNTY FIRE AUTHORITY Station #78 Santa Ana	501 N Newhope St Santa Ana	CERS-CA	Listed	0.14 NW	0
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	226542 SANTA ANA FIRE STATION #8	501 N NEWHOPE ST SANTA ANA	CRSP-CA	Listed	0.14 NW	0
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902293 SANTA ANA FIRE STATION #8	501 N NEWHOPE ST SANTA ANA	ENF-CA	Listed	0.14 NW	0
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	231312 FIRE STATION 8	501 NO NEWHOPE SANTA ANA	Hist-UST-CA	Listed	0.14 NW	0
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1215828 SANTA ANA FIRE STATION #8	501 N NEWHOPE SANTA ANA	Hist-USTReg-CA	Listed	0.14 NW	0
<a href="#">3</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902293 SANTA ANA FIRE STATION #8	501 N NEWHOPE ST SANTA ANA	LUST-Closed-CA	Completed - Case Closed	0.14 NW	0
<a href="#">4</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CA3000960 CAL VA DAIRY	4226 W 005TH ST SANTA ANA	SDWIS-US	Changed from public to non- public	0.15 NE	1
<a href="#">5</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	323015-PD SAMS CLEANERS	4417 W 1ST ST SANTA ANA	Hist-Cleaners	Listed	0.15 S	-3
<a href="#">6</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6479127 G AND M OIL / (CHEVRON)	4505 01ST STREET, WEST SANTA ANA	Hist-LUSTIS-CA	Listed	0.16 SW	-1
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC- 52835 G & M OIL CO, LLC #30	4505 W FIRST ST SANTA ANA	Air-CA	Listed	0.16 SW	-2



MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	52835-SC G & M OIL CO, LLC #30	4505 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10138221 G&M Oil Co. #30	4505 W 1st St Santa Ana	CERS-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	81-ORG-SNA CHEVRON (G&M OIL) # 30	4505 W. 1st Santa Ana	City-UST-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0035327-ORG G&M OIL CO #30	4505 W 1ST ST SANTA ANA	County-Others-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0035327-ORG G&M OIL CO #30	4505 W 1ST ST SANTA ANA	County-UST-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	239450 G & M OIL #30	4505 W 1ST ST SANTA ANA	CRSP-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	118542 G&M Oil Co. #30	4505 W 1ST ST SANTA ANA	CRSP-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845 G & M OIL #30	4505 W 1ST ST SANTA ANA	ENF-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	210967 CHEVRON (G&M OIL)	4505 W. 1ST SANTA ANA	Hist-Service Stations	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	155776 Chevron	4505 W 1st St Santa Ana	Hist-Service Stations	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	267458 STATION 004	4505 W FIRST ST SANTA ANA	Hist-UST-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845 Site Name Not Reported	4505 1ST ST W SANTA ANA	Hist-UST-Cleanup- CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	4016269 G & M OIL CO INC #30	4505 W 1ST SANTA ANA	Hist-USTReg-CA	Listed	0.16 SW	-2

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845 G & M OIL #30	4505 W 1ST ST SANTA ANA	LUST-Closed-CA	Completed - Case Closed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000004961 G & M OIL CO INC #30	4505 W FIRST SANTA ANA	RCRA-NON-US	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	144502 G&M Oil Co. #30	4505 W 1st St Santa Ana	UST-CA	Listed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1408 G&M Oil #30	4505 1st St. W. Santa Ana	UST-Closed-CA	Closed	0.16 SW	-2
<a href="#">7</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	118542 G&M Oil Co. #30	4505 W 1ST ST SANTA ANA	UST-CRSP-CA	Listed	0.16 SW	-2
<a href="#">8</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6117 LUNO WASTE OIL	4322 W. SILVER DRIVE SANTA ANA	HWT-CA	Listed	0.17 N	0
<a href="#">9</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6714536 SUPERIOR PROPANE	4426 01ST STREET, WEST SANTA ANA	Hist-LUSTIS-CA	Listed	0.17 S	-3
<a href="#">10</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC- 108933 SANDFROG, LLC	4521 W 1ST ST #B SANTA ANA	Air-CA	Listed	0.18 SW	-1
<a href="#">10</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	108933-SC SANDFROG, LLC	4521 W 1ST ST #B SANTA ANA	AIR-DIST-CA	Listed	0.18 SW	-1
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	162383-SC CITY OF SANTA ANA, PUBLIC WORKS AGENCY	4426 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	178939-SC WEST STATION	4426 W 1ST ST SANTA ANA	AIR-DIST-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10543402 LP	4426 W 1ST ST A&B SANTA ANA	CERS-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	351030 GW Cleanup-S.A., 1st St.	4426 FIRST SANTA ANA	CRSP-CA	Listed	0.19 S	-4

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	201077 SUPERIOR PROPANE	4426 W 1ST ST SANTA ANA	CRSP-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902011 SUPERIOR PROPANE	4426 W 1ST ST SANTA ANA	ENF-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	30130175 HUGH'S SERVICE	4426 W 1ST STREET SANTA ANA	Eval-Hist-Other-CA	Refer: RWQCB	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1162966 HUGH'S SERVICE	4426 W 1ST STREET SANTA ANA	Hist-CALSITES-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	30130175 HUGH'S SERVICE	4426 W 1ST STREET SANTA ANA	Historical-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	216216 BEE PETROLEUM SERVICE STATION	4426 W FIRST ST SANTA ANA	Hist-UST-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	216215 BEE PETROLEUM CORP	4426 W FIRST ST SANTA ANA	Hist-UST-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1253034 BEE PETROLEUM SERVICE	4426 W 1ST SANTA ANA	Hist-USTReg-CA	Listed	0.19 S	-4
<a href="#">11</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902011 SUPERIOR PROPANE	4426 W 1ST ST SANTA ANA	LUST-Closed-CA	Completed - Case Closed	0.19 S	-4
<a href="#">12</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	55885-SC H & H AUTO BODY/PAINTS	4525 W FIRST C ST SANTA ANA	AIR-DIST-CA	Listed	0.19 SW	-2
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC- 155084 CHAU AUTO BODY & REPAIR	4525 W 1ST ST STE C SANTA ANA	Air-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	83349-SC P & B AUTO BODY REPAIR	4525 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	136932-SC XE AUTOBODY AND REPAIR	4525 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.2 SW	1

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	155084-SC CHAU AUTO BODY & REPAIR	4525 W 1ST ST STE C SANTA ANA	AIR-DIST-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10539271 FRANKS COMPUTERIZED AUTO CTR	4525 W 1ST ST STE A SANTA ANA	CERS-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10539259 ALFA AUTO REPAIR	4525 W 1ST ST STE B SANTA ANA	CERS-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10523911 CHAU AUTO BODY & PAINT	4525 W 1ST ST STE C SANTA ANA	CERS-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0046747-ORG BEN BI AUTO BODY & REPAIR	4525 W 1ST ST STE C SANTA ANA	County-Others-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0027216-ORG FRANKS COMPUTERIZED AUTO CTR	4525 W 1ST ST STE A SANTA ANA	County-Others-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0027212-ORG ALFA AUTO REPAIR	4525 W 1ST ST STE B SANTA ANA	County-Others-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	439941 FRANKS COMPUTERIZED AUTO CTR	4525 W 1ST ST STE A SANTA ANA	CRSP-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	413991 ALFA AUTO REPAIR	4525 W 1ST ST STE B SANTA ANA	CRSP-CA	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	530689-PD P & B AUTO BODY REPAIR	4525 W 1ST ST SANTA ANA	Hist-Auto Repair	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	373855-PD ALFA AUTO REPAIR	4525 W 1ST ST # B SANTA ANA	Hist-Auto Repair	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	440061-PD FRANKS COMPUTERIZED AUTO CTR	4525 W 1ST ST # A SANTA ANA	Hist-Auto Repair	Listed	0.2 SW	1
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000438618 FRANK'S COMPUTERIZED AUTO CENTER	4525 W 1ST ST STE A SANTA ANA	RCRA-NON-US	Listed	0.2 SW	1

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">13</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAD982016818 FIRST AUTO BODY & RPR	4525 W 1ST ST UNIT C SANTA ANA	RCRA-SQG-US	Listed	0.2 SW	1
<a href="#">14</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAD046591392 KENS OIL CO INC	4108 W FIFTH ST SANTA ANA	RCRA-NON-US	Listed	0.2 NE	2
<a href="#">15</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	376717-PD ALS TRUCK REPAIR SVC	201 S MOUNTAIN VIEW ST SANTA ANA	Hist-Auto Repair	Listed	0.21 S	-3
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC- 135879 PRO ONE AUTO BODY SHOP, INC.	4609 W FIRST ST SANTA ANA	Air-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC- 143881 PHU'S AUTO BODY & REPAIRING	4609 W FIRST ST # C SANTA ANA	Air-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	60236-SC THE CAR SHOP	4609 FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	98957-SC LEONS AUTO BODY SHOP, MANUEL FERNANDES	4609 W FIRST ST #A SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	158583-SC CN AUTO BODY AND PAINT	4609 W FIRST ST #B SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	66159-SC LEON'S AUTO BODY SHOP	4609 W 1ST SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	112501-SC FIRST AUTO BODY REPAIR & PAINT, C NGUYEN	4609 W FIRST ST # C SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	62362-SC TRIPLE GENERAL AUTO	4609 W 1ST ST #C SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	135879-SC PRO ONE AUTO BODY SHOP, INC.	4609 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	143881-SC PHU'S AUTO BODY & REPAIRING	4609 W FIRST ST # C SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	113014-SC PRO, ONE AUTO BODY & DETAIL	4609 W FIRST ST SANTA ANA	AIR-DIST-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10538893 CN AUTO BODY AND REPAIR	4609 W 1ST ST STE B SANTA ANA	CERS-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10549042 PHUS AUTO BODY & REPAIR	4609 W 1ST ST STE C SANTA ANA	CERS-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10549036 PRO 1 AUTO BODY SHOP INC	4609 W 1ST ST STE A SANTA ANA	CERS-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0040004-ORG PRO 1 AUTO BODY SHOP INC	4609 W 1ST ST STE A SANTA ANA	County-Others-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0026815-ORG CN AUTO BODY AND REPAIR	4609 W 1ST ST STE B SANTA ANA	County-Others-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0040005-ORG PHUS AUTO BODY & REPAIR	4609 W 1ST ST STE C SANTA ANA	County-Others-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	447456 CN AUTO BODY AND REPAIR	4609 W 1ST ST STE B SANTA ANA	CRSP-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	446581 PRO 1 AUTO BODY SHOP INC	4609 W 1ST ST STE A SANTA ANA	CRSP-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	488196 PRO ONE AUTO BODY SHOP, INC.	4609 W FIRST ST SANTA ANA	CRSP-CA	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000441892 CN AUTO BODY AND REPAIR	4609 W FIRST ST STE #B SANTA ANA	RCRA-NON-US	Listed	0.21 SW	0
<a href="#">16</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000265050 PHUS AUTO BODY & REPAIR INC	4609 W 1ST ST STE C SANTA ANA	RCRA-NON-US	Listed	0.21 SW	0
<a href="#">17</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	780551 Manhole ID G03- 026	702 Mountain View Street Santa Ana	Spills-SSO-CA	Listed	0.22 N	1

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
<a href="#">18</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10537999 ALANS LAWN MOWER	4621 W 1ST ST SANTA ANA	CERS-CA	Listed	0.23 SW	-1
<a href="#">18</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0026032-ORG ALANS LAWN MOWER	4621 W 1ST ST SANTA ANA	County-Others-CA	Listed	0.23 SW	-1
<a href="#">18</a> Maps: <a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	429385 ALANS LAWN MOWER	4621 W 1ST ST SANTA ANA	CRSP-CA	Listed	0.23 SW	-1
<a href="#">19</a> Maps: <a href="#">1</a> , <a href="#">4</a>	T0605901710 PIEPER PROPERTY	101 N HARBOR BLVD SANTA ANA	LUST-Closed-CA	Completed - Case Closed	0.46 E	1

## POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
NPL-R9-US	No	0
MethaneLF-CA	No	0
LA-LF-CA	No	0
Military-Bases-US	No	0
SGV-Deep-Plumes-CA	No	0
SGV-Shallow-Plumes-Puente-Valley-CA	No	0
SGV-Shallow-Plumes-CA	No	0

## DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
CERCLIS-US	0.5	0
CorAct-Open-CA	0.5	0
County-LUST-Open-CA	0.5	0
County-SLIC-Open-CA	0.5	0
Eval-Hist-Active-CA	0.5	0
Hist-UST-Cleanup-CA	0.5	1
LUST-Open-CA	0.5	0
Military-Active-CA	1	0
NPL-US	1	0
Proposed-NPL-US	1	0
Response-CA	1	0
SAA-Agreements-US	1	0
School-Active-CA	0.5	0
SLIC-Open-CA	0.5	0
State-Response-Active-CA	1	0
Superfund-Active-CA	1	0
Tribal-LUST-Open-Reg9	0.5	0
VCP-Active-CA	0.5	0

\* For the purposes of this report, "high risk" occurrences are those that have known contamination and have not received a "case closed" or "no further action" status from the agency that maintains the records.

## ASTM/AAI STANDARD RECORD SOURCES SUMMARY

STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST. (MILES)	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #'S
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed



Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed
Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSDF-US	0	None Listed
Federal RCRA generators list	Property and adjoining properties / 0.25	RCRA-CESQG-US	0	None Listed
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	6	<a href="#">2</a> , <a href="#">7</a> , <a href="#">13</a> , <a href="#">14</a> , <a href="#">16</a> , <a href="#">16</a>
		RCRA-SQG-US	1	<a href="#">13</a>
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625	ERNS-US	0	None Listed
State and Tribal-Equivalent NPL	1.0 / 1.0	Response-CA	0	None Listed
		State-Response-Active-CA	0	None Listed
		State-Response-NFA-CA	0	None Listed
		State-Response-Other-CA	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	Superfund-Active-CA	0	None Listed
		Superfund-NFA-CA	0	None Listed
		Superfund-Other-CA	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	County-SWF-CA	0	None Listed
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Land-Disposal-CA	0	None Listed
		SWIS-CA	0	None Listed
		SWLF-US	0	None Listed
		Tribal-ODI-US	0	None Listed
		County-LUST-CA	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	County-LUST-Closed-CA	0	None Listed
		County-LUST-Open-CA	0	None Listed
		Hist-UST-Cleanup-CA	1	<a href="#">7</a>
		LUST-Closed-CA	4	<a href="#">3</a> , <a href="#">7</a> , <a href="#">11</a> , <a href="#">19</a>
		LUST-Open-CA	0	None Listed

State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	Tribal-LUST-Closed-Reg9	0	None Listed
		Tribal-LUST-Open-Reg9	0	None Listed
		AST-CA	0	None Listed
		AST-CRSP-CA	0	None Listed
		City-AST-CA	0	None Listed
		City-UST-CA	1	<a href="#">7</a>
		County-AST-CA	0	None Listed
		County-UST-CA	1	<a href="#">7</a>
		FEMA-UST-US	0	None Listed
		Hist-UST-CA	4	<a href="#">3</a> , <a href="#">7</a> , <a href="#">11</a> , <a href="#">11</a>
		Tribal-UST-Reg9	0	None Listed
		UST-Abandoned-CA	0	None Listed
		UST-CA	1	<a href="#">7</a>
		UST-Closed-CA	1	<a href="#">7</a>
		USTComp-CA	0	None Listed
		UST-CRSP-CA	1	<a href="#">7</a>
		UST-Priority-CA	0	None Listed
		UST-Proposed-CA	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5	Controls-CA	0	None Listed
		Deed-CA	0	None Listed
		Hist-Controls-CA	0	None Listed
		HWMP-Controls-CA	0	None Listed
		Liens-CA	0	None Listed
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Military-Active-CA	0	None Listed
		Military-NFA-CA	0	None Listed
		Military-Other-CA	0	None Listed
		School-Active-CA	0	None Listed
		School-NFA-CA	0	None Listed
		School-Other-CA	0	None Listed
		Tribal-VCP-US	0	None Listed
		VCP-Active-CA	0	None Listed
		VCP-NFA-CA	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	VCP-Other-CA	0	None Listed
		BF-MOA-CA	0	None Listed
		BF-Tribal-US	0	None Listed

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
BF-Tribal-US	0.5	0	0	0	0	-	0
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
CERCLIS-US	0.5	0	0	0	0	-	0
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.25	0	0	0	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	1	5	-	-	6
RCRA-SQG-US	0.25	0	0	1	-	-	1
RCRA-TSDF-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
SWLF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
AST-CA	0.25	0	0	0	-	-	0
AST-CRSP-CA	0.25	0	0	0	-	-	0
BF-MOA-CA	0.5	0	0	0	0	-	0
BZ-HazWaste-CA	0.5	0	0	0	0	-	0
CERS-CA	0.25	0	1	9	-	-	10
CHMIRS-CA	0.0625	0	0	-	-	-	0
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	1	-	-	1
Controls-CA	0.5	0	0	0	0	-	0
CorAct-Closed-CA	0.5	0	0	0	0	-	0
CorAct-Open-CA	0.5	0	0	0	0	-	0
CorAct-Other-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	0	0	-	-	0
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0
County-LUST-Closed-CA	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
County-LUST-Open-CA	0.5	0	0	0	0	-	0
County-Others-CA	0.25	0	0	8	-	-	8
County-SLIC-Closed-CA	0.25	0	0	0	-	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0
County-SWF-CA	0.5	0	0	0	0	-	0
County-UST-CA	0.25	0	0	1	-	-	1
CRSP-CA	0.25	0	1	10	-	-	11
CUPA-CA	0.25	0	0	0	-	-	0
Deed-CA	0.5	0	0	0	0	-	0
ENF-CA	0.25	0	1	2	-	-	3
ENF-SMARTS-CA	0.25	0	0	0	-	-	0
ENF-Wastewater-CA	0.25	0	0	0	-	-	0
Eval-Hist-Active-CA	0.5	0	0	0	0	-	0
Eval-Hist-NFA-CA	0.5	0	0	0	0	-	0
Eval-Hist-Other-CA	0.5	0	0	1	0	-	1
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	0	0	-	-	0
HIST-SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
HIST-SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	1	3	-	-	4
Hist-UST-Cleanup-CA	0.5	0	0	1	0	-	1
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.0625	0	0	-	-	-	0
HWMP-Controls-CA	0.5	0	0	0	0	-	0
ICE-CA	0.25	0	0	0	-	-	0
Land-Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.0625	0	0	-	-	-	0
LUST-Closed-CA	0.5	0	1	2	1	-	4
LUST-Open-CA	0.5	0	0	0	0	-	0
Manifest2-RI	0.0625	0	0	-	-	-	0
Military-Active-CA	1	0	0	0	0	0	0
Military-NFA-CA	0.5	0	0	0	0	-	0
Military-Other-CA	1	0	0	0	0	0	0
PR-MOA-CA	0.25	0	0	0	-	-	0
Response-CA	1	0	0	0	0	0	0
School-Active-CA	0.5	0	0	0	0	-	0
School-NFA-CA	0.5	0	0	0	0	-	0
School-Other-CA	0.5	0	0	0	0	-	0
SLIC-Closed-CA	0.5	0	0	0	0	-	0
SLIC-Open-CA	0.5	0	0	0	0	-	0
SML-CA	0.5	0	0	0	0	-	0
State-Response-Active-CA	1	0	0	0	0	0	0
State-Response-NFA-CA	0.5	0	0	0	0	-	0
State-Response-Other-CA	0.5	0	0	0	0	-	0
Superfund-Active-CA	1	0	0	0	0	0	0
Superfund-NFA-CA	1	0	0	0	0	0	0
Superfund-Other-CA	1	0	0	0	0	0	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0
UST-Abandoned-CA	0.25	0	0	0	-	-	0

### STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
UST-CA	0.25	0	0	1	-	-	1
UST-Closed-CA	0.25	0	0	1	-	-	1
USTComp-CA	0.25	0	0	0	-	-	0
UST-CRSP-CA	0.25	0	0	1	-	-	1
UST-Priority-CA	0.5	0	0	0	0	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0
VCP-Active-CA	0.5	0	0	0	0	-	0
VCP-NFA-CA	0.5	0	0	0	0	-	0
VCP-Other-CA	0.5	0	0	0	0	-	0

### SUPPLEMENTAL DATABASES

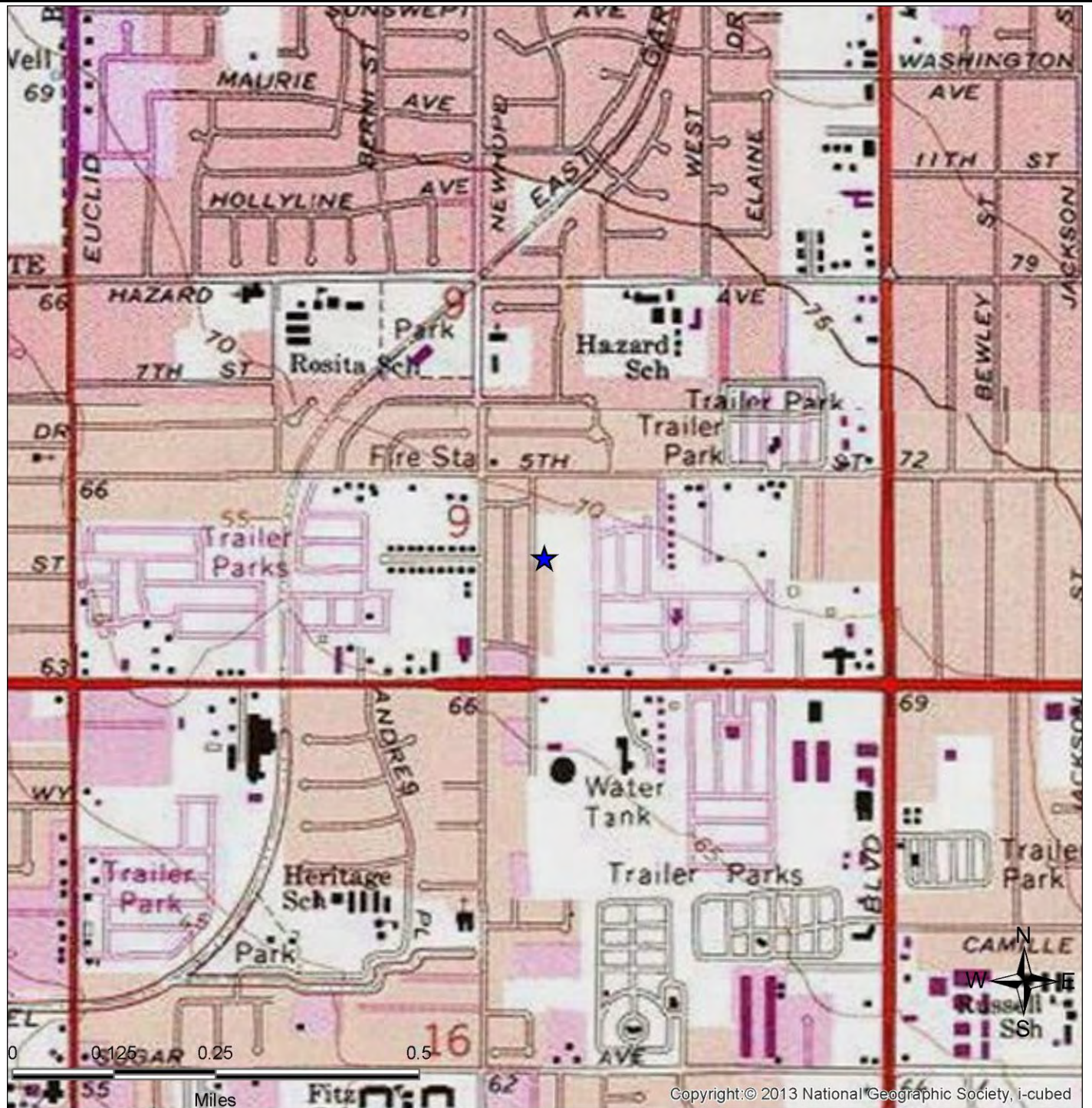
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-CA	0.25	0	0	5	-	-	5
AIR-DIST-CA	0.25	0	0	17	-	-	17
BioFuel-US	0.25	0	0	0	-	-	0
CAF-CA	0.25	0	0	0	-	-	0
CDL-CA	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
CHWF-CA	0.5	0	0	0	0	-	0
Cleaners-CA	0.25	0	0	0	-	-	0
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
County-BI-CA	0.25	0	0	0	-	-	0
Dams-CA	0.25	0	0	0	-	-	0
DPR-CA	0.25	0	0	0	-	-	0
DryCleaners-CA	0.25	0	0	0	-	-	0
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-CA	0.0625	0	0	-	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-SWF-CA	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	0	-	-	-	0
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0
FUSRAP-US	0.25	0	0	0	-	-	0
Haulers-CA	0.0625	0	0	-	-	-	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AST-CA	0.25	0	0	0	-	-	0
Hist-AWS-CA	0.25	0	0	0	-	-	0
Hist-CA	0.0625	0	0	-	-	-	0
Hist-CalFID-CA	0.25	0	0	0	-	-	0
Hist-CALSITES-CA	0.25	0	0	1	-	-	1
Hist-CERCLIS-NFRAP-US	0.25	0	0	0	-	-	0
Hist-CERCLIS-US	0.25	0	0	0	-	-	0
Hist-City-UST-CA	0.25	0	0	0	-	-	0
Hist-Deed-CA	0.25	0	0	0	-	-	0
Hist-DTG-CA	0.25	0	0	0	-	-	0
Hist-ERNS-US	0.0625	0	0	-	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-FINDS-US	0.0625	0	0	-	-	-	0
Hist-HWS-CA	0.25	0	0	0	-	-	0
Hist-LUSTIS-CA	0.25	0	0	2	-	-	2

SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
HIST-MLTS-US	0.25	0	0	0	-	-	0
HIST-MTBE-CA	0.25	0	0	0	-	-	0
Hist-NPL-US	0.25	0	0	0	-	-	0
Hist-Orange-County-LF-CA	0.25	0	0	0	-	-	0
Historical-CA	0.5	0	0	1	0	-	1
Hist-Prop65-CA	0.25	0	0	0	-	-	0
Hist-RCRIS-US	0.25	0	0	0	-	-	0
Hist-Regional-LUST-CA	0.25	0	0	0	-	-	0
Hist-Regional-Other-CA	0.25	0	0	0	-	-	0
Hist-Regional-SLIC-CA	0.25	0	0	0	-	-	0
Hist-Regional-Spills-CA	0.25	0	0	0	-	-	0
Hist-Regional-SWLF-CA	0.25	0	0	0	-	-	0
Hist-Regional-UST-CA	0.25	0	0	0	-	-	0
Hist-SCL-CA	0.25	0	0	0	-	-	0
Hist-SWIS-CA	0.25	0	0	0	-	-	0
Hist-ToxicPits-CA	0.25	0	0	0	-	-	0
Hist-TRIS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	0	-	-	-	0
Hist-USGS-WaterWells-CA	0.0625	0	0	-	-	-	0
Hist-USTReg-CA	0.25	0	1	2	-	-	3
Hist-WaterWells-US	0.0625	0	0	-	-	-	0
Hist-WMUDS-CA	0.25	0	0	0	-	-	0
HWT-CA	0.25	0	0	1	-	-	1
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
LA-Waste-Haulers-CA	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
LMOP-US	0.5	0	0	0	0	-	0
Mines2-CA	0.0625	0	0	-	-	-	0
Mines-CA	0.0625	0	0	-	-	-	0
Mines-CDMG-CA	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
Mortgage-CA	0.25	0	0	0	-	-	0
MRDS-US	0.25	0	0	0	-	-	0
MWMP-CA	0.25	0	0	0	-	-	0
NCI-CA	0.25	0	0	0	-	-	0
NEI-LF-CA	0.25	0	0	0	-	-	0
NPDES-CA	0.0625	0	0	-	-	-	0
NPDES-SW-CA	0.0625	0	0	-	-	-	0
OGM-CA	0.0625	0	0	-	-	-	0
OGW-CA	0.0625	0	0	-	-	-	0
OSCF-CA	0.5	0	0	0	0	-	0
PCS-US	0.25	0	0	0	-	-	0
Perch1-CA	0.25	0	0	0	-	-	0
Perch2-CA	0.25	0	0	0	-	-	0
Project-CA	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	1	0	-	-	1
SP-CA	0.25	0	0	0	-	-	0

SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Spills-SSO-CA	0.25	0	0	1	-	-	1
SSTS-US	0.0625	0	0	-	-	-	0
TierPer-CA	0.25	0	0	0	-	-	0
TOMS-CA	0.0625	0	0	-	-	-	0
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC2-CA	0.0625	0	0	-	-	-	0
UIC-CA	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
WDR-CA	0.25	0	0	0	-	-	0

PROPRIETARY HISTORIC DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	0	-	-	-	0
Hist-Auto Repair	0.25	0	0	4	-	-	4
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	1	0	-	-	1
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Other	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	0	-	-	-	0
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	0	2	-	-	2
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	1	-	-	-	1





## **SITE LOCATION TOPOGRAPHIC MAP**

U.S. Geological Survey. Newport Beach (digital) (Date Unavailable) Quadrangle, 7.5 Minute Series

S&S Commercial Environmental  
Services, Inc.

305 N Mountain View  
, Santa Ana, CA 92703

FIGURE: 1  
JOB: 2104714539  
DATE: 10/25/2019





## **SITE LOCATION MAP**

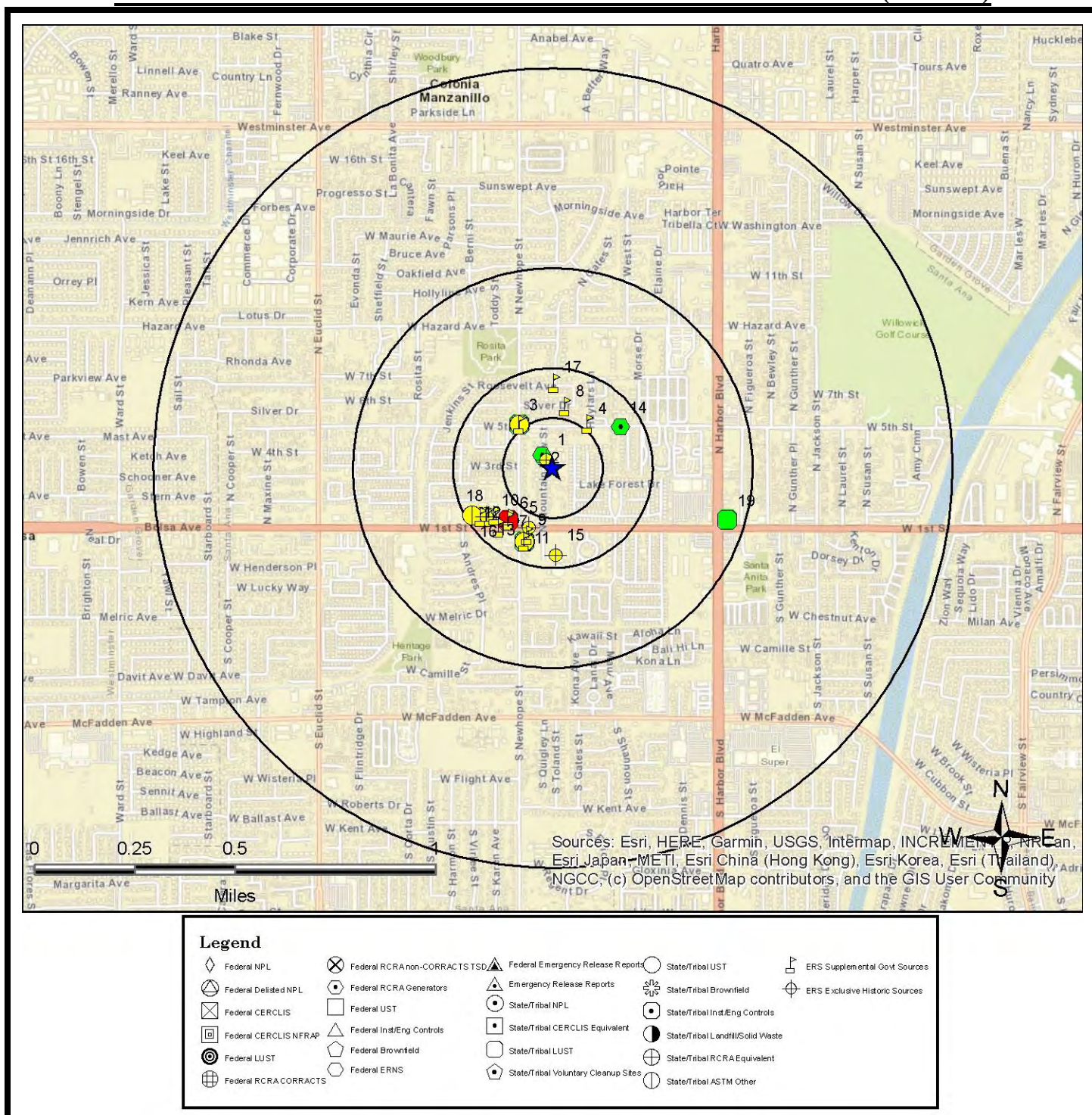
S&S Commercial Environmental  
Services, Inc.

305 N Mountain View  
, Santa Ana, CA 92703

FIGURE: 2  
JOB: 2104714539  
DATE: 10/25/2019



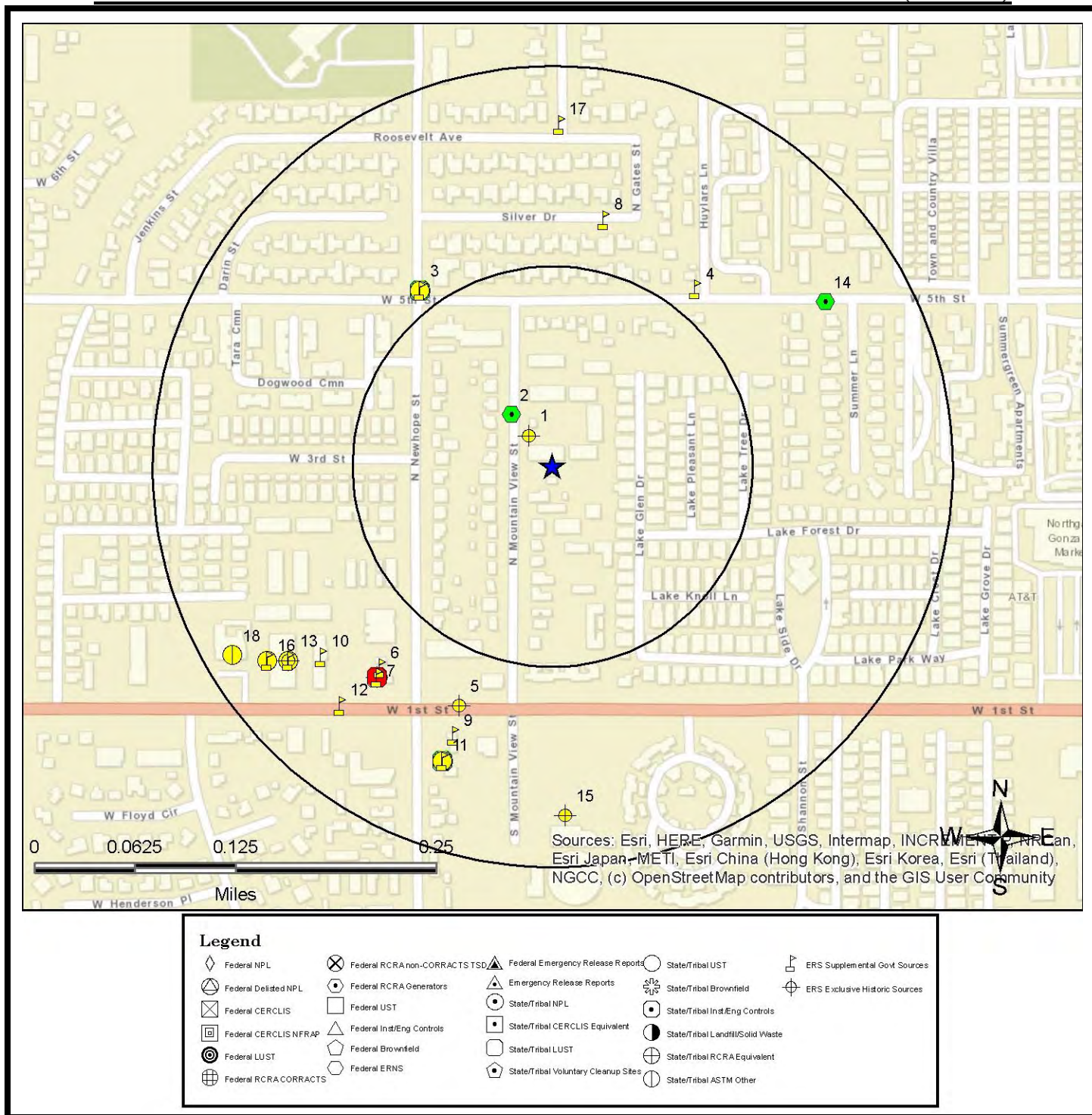
# 1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

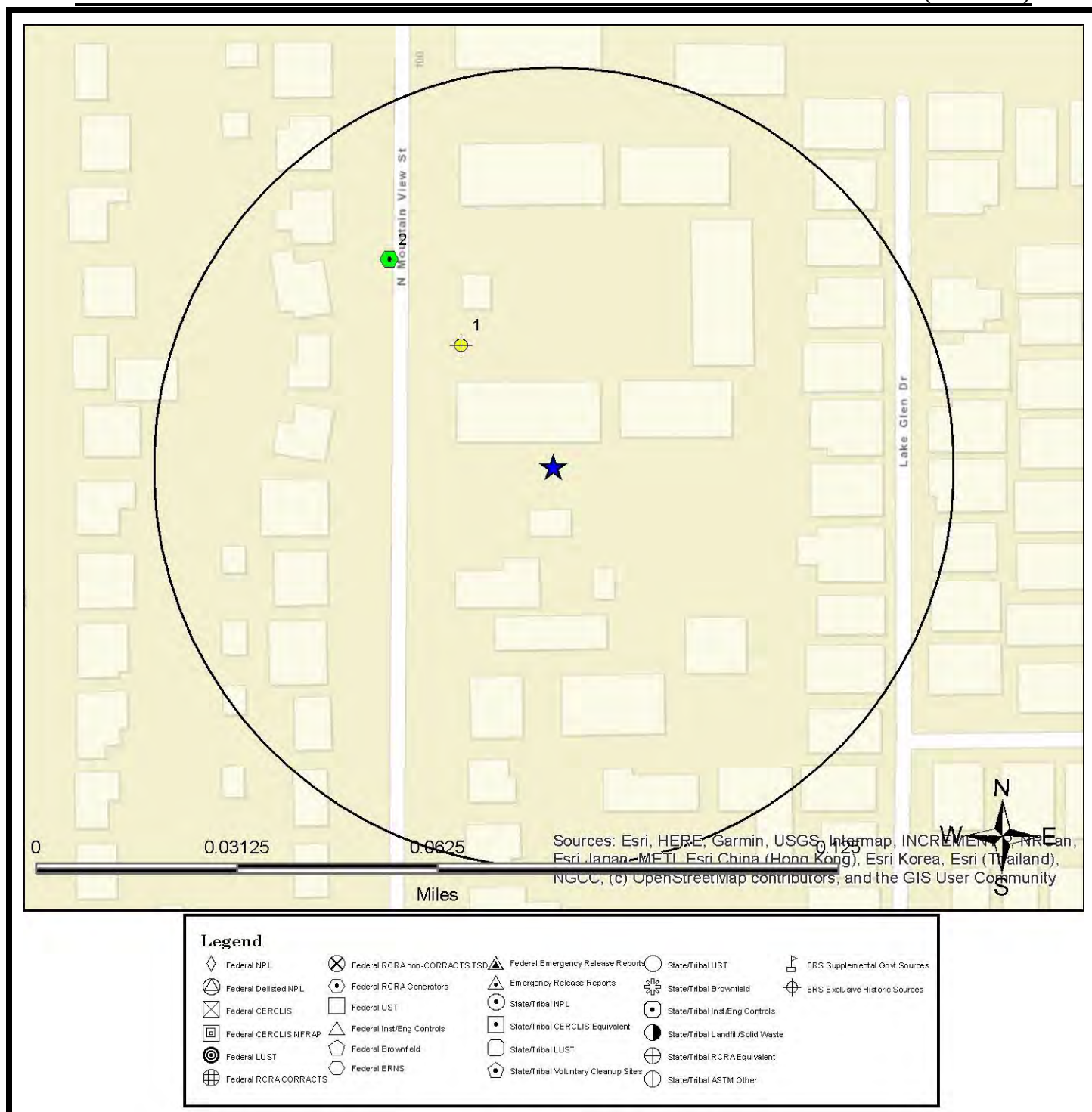


## 0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

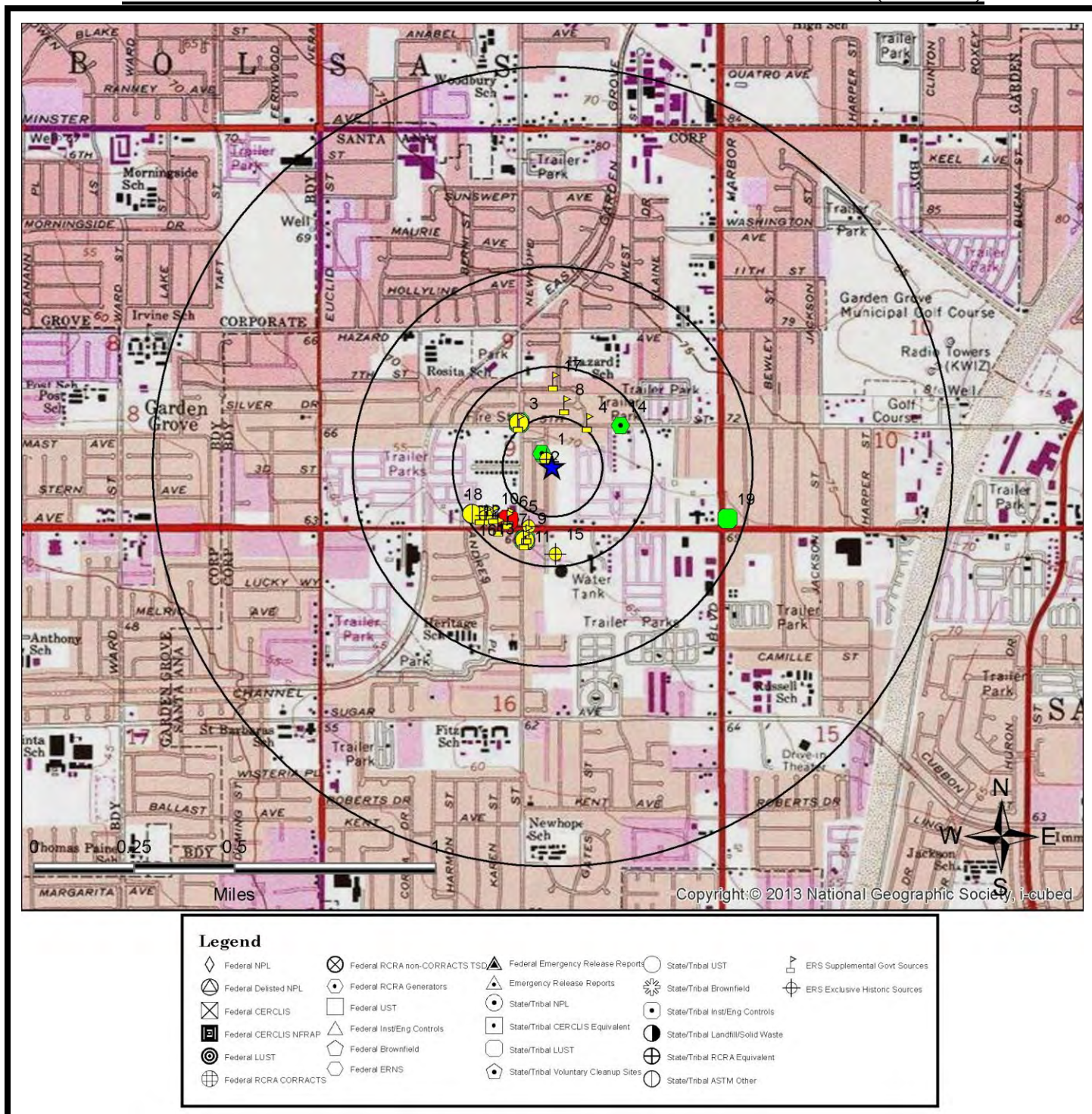
## 0.0625-MILE RADIUS STREET MAP W/ OCCURRENCES (MAP3)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Occurrences are shown in three colors to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.



# 1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP4)

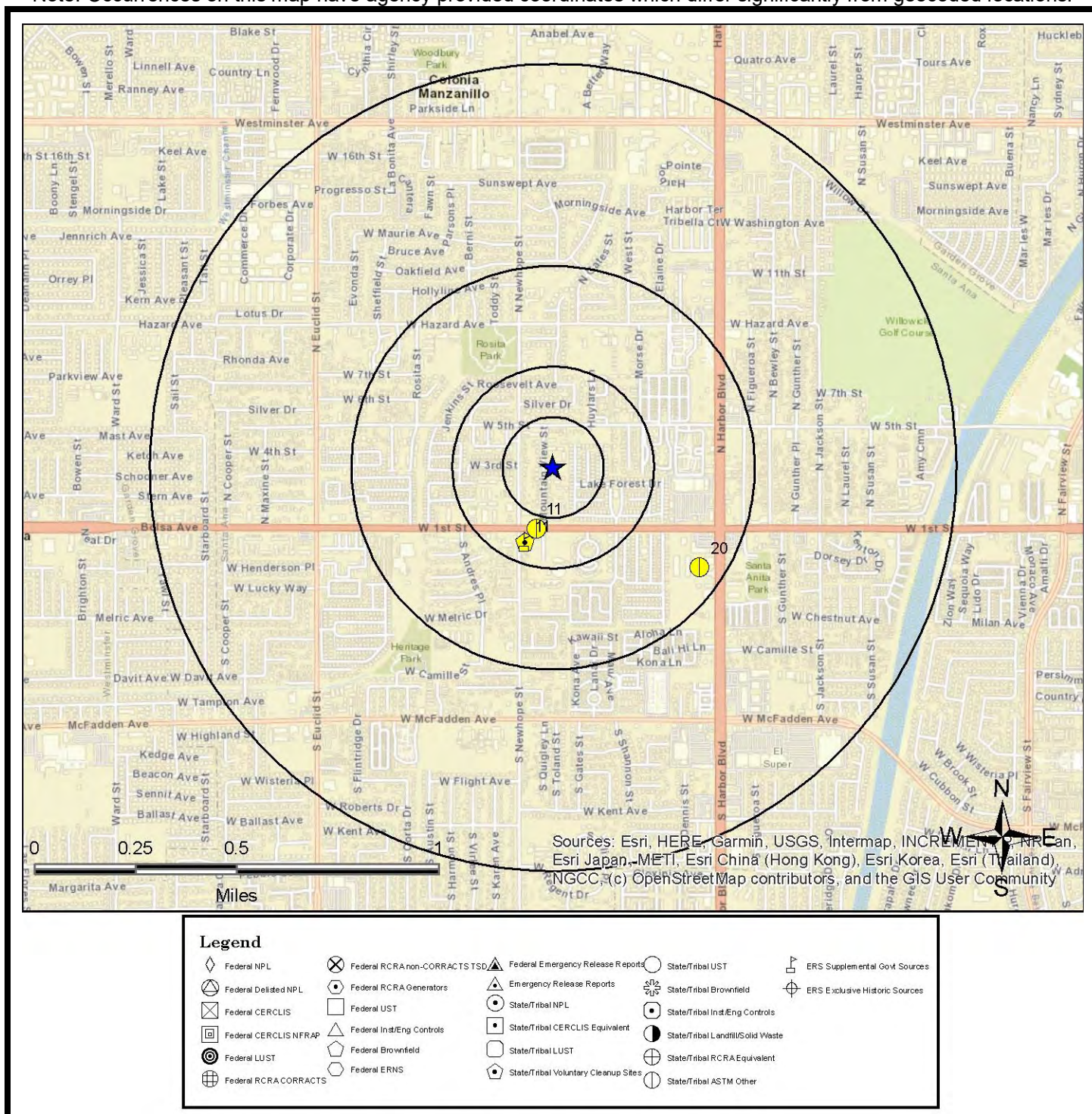


All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Occurrences are shown in three colors to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.



## AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP5)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.



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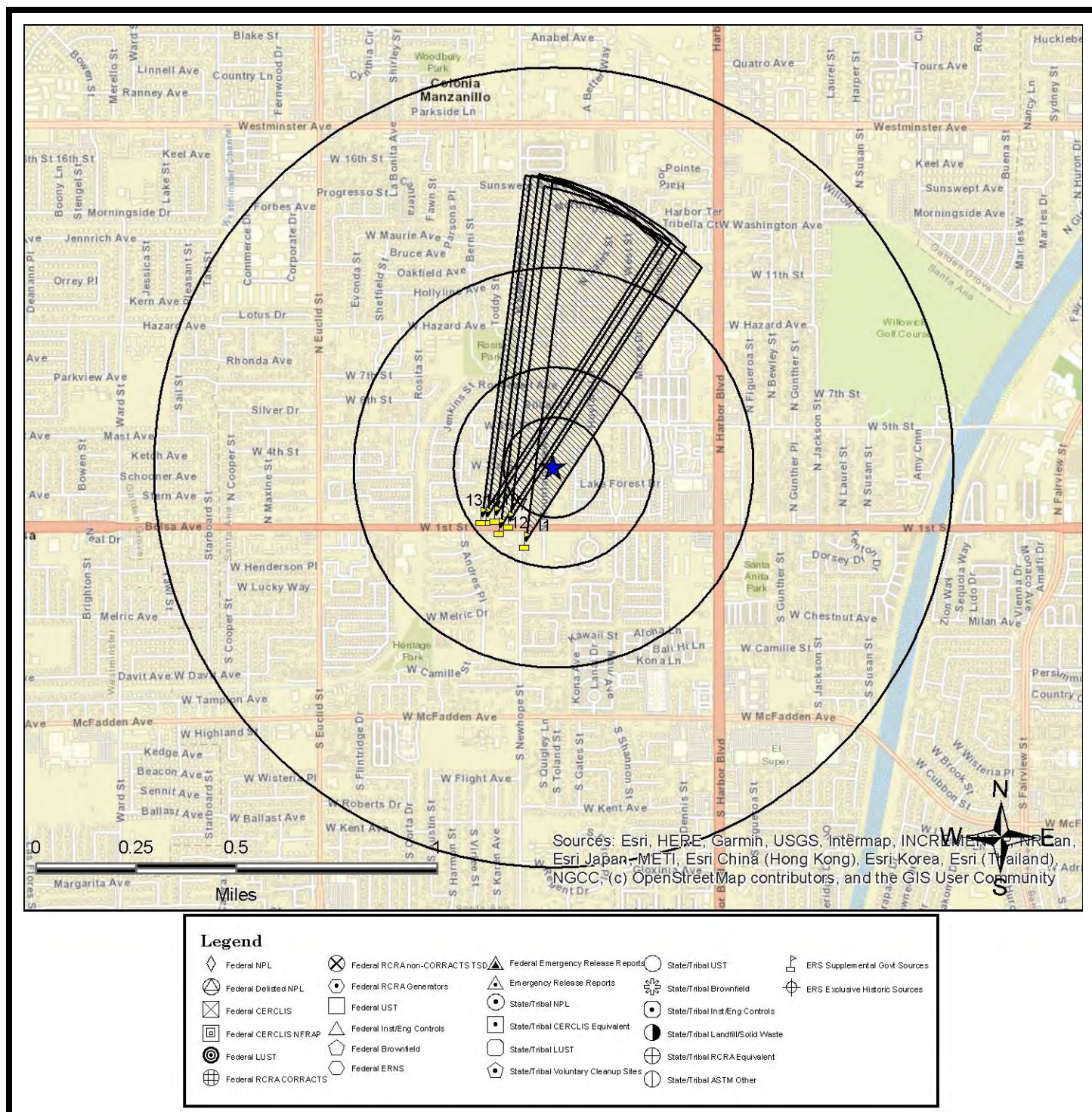
## SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
11	351030 GW Cleanup-S.A., 1st St.	4426 FIRST CRSP-CA	-117.92797, 33.74512	0.15	S
11	30130175 HUGH'S SERVICE	4426 W 1ST STREET Eval-Hist-Other-CA	-117.92846, 33.74463	0.19	S
11	30130175 HUGH'S SERVICE	4426 W 1ST STREET Historical-CA	-117.92846, 33.74463	0.19	S
20	RC197376.001 Trojan Recycling Center	1419 E California Pl SWRCY-CA	-117.92093, 33.74377	0.44	SE



# MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP6)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminants may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminant, amount released, and other variables, the distance from the source the contaminant may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

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## LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Vehicle-Washing	Listed	0.03 miles NW	70 ft (1 ft lower than site)	<b>1</b>
SITE NAME			MAPS	ID
CALIFORNIA PERFECTION			<a href="#">1</a> , <a href="#">2</a> , <a href="#">3</a> , <a href="#">4</a>	342550-PD
ADDRESS			CITY	ZIP
365 N MOUNTAIN VIEW ST			SANTA ANA	92703-3278
DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE DETAIL & CLEAN-UP SERVICE SIC Code: 754203				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.05 miles NW	70 ft (1 ft lower than site)	<b>2</b>
SITE NAME			MAPS	ID
WANDA BROWN			<a href="#">1</a> , <a href="#">2</a> , <a href="#">3</a> , <a href="#">4</a>	CAC002973898
ADDRESS			CITY	ZIP
206 NORTH MOUNTAIN VIEW ST			SANTA ANA	92703

## DETAILS

Additional details may be found online using the following link:

[http://oaspub.epa.gov/enviro/fii\\_query\\_dtl.disp\\_program\\_facility?pgm\\_sys\\_id\\_in=CAC002973898&pgm\\_sys\\_acrnm\\_in=RCRAINFO](http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAC002973898&pgm_sys_acrnm_in=RCRAINFO)

Source Type: Implementer  
 Generator Status Universe: N  
 Generator Status: Non-Generator  
 NAICS1: ALL OTHER WASTE MANAGEMENT SERVICES  
 Active Site Indicator: H----  
 Owner Name: WANDA BROWN  
 Operator Name: WANDA BROWN  
 In Handler Universes: Y  
 In a Universe: Y  
 Short Term Generator: N  
 Importer Activity: N  
 Mixed Waste Generator: N  
 Transporter Activity: Y  
 Transfer Facility: N  
 Recycler Activity: N  
 Onsite Burner Exemption: N  
 Furnace Exemption: N  
 Underground Injection Activity: N  
 Receives Waste From Off-site: N  
 Universal Waste: N  
 Universal Waste Destination Facility: Y  
 Used Oil Universe: NNNNNNN  
 Federal Universal Waste: N  
 Active Site Federally Regulated TSDF: -----

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
ORANGE COUNTY FIRE AUTHORITY Station #78 Santa Ana			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10689694
ADDRESS			CITY	ZIP
501 N Newhope St			Santa Ana	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10689694  
 Facility ID: Not Reported  
 Facility Regulator Key ID: Not Reported  
 Organization Code: 90438154  
 Business/Organization Name: ORANGE COUNTY FIRE AUTHORITY  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 1  
 Facility Count for Business: 73  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
SANTA ANA FIRE STATION #8			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	226542
ADDRESS			CITY	ZIP
501 N NEWHOPE ST			SANTA ANA	92703

## DETAILS

**Site Regulated Program Information**

Site ID: 226542

Site EI ID: T0605902293

Agency Provided Latitude: 33.749052

Agency Provided Longitude: -117.928486

Program Description: Leaking Underground Storage Tank Cleanup Site

**Evaluation Information**

: Not Reported

: Violation Information

: Not Reported

: Enforcement Information

: Not Reported

: Chemical Information

: Not Reported

: Coordinate Information

: Not Reported

:

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
SANTA ANA FIRE STATION #8			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902293
ADDRESS			CITY	ZIP
501 N NEWHOPE ST			SANTA ANA	92703

## DETAILS

Global ID: T0605902293  
 County: Orange  
 Site History: Not Reported  
 Case Type: LUST Cleanup Site  
 Status: Completed - Case Closed  
 Lead Agency: SANTA ANA RWQCB (REGION 8)  
 Case Worker: NOM  
 Local Agency: SANTA ANA, CITY OF  
 RB Case Number: 083003476T  
 Loc Case Number: Not Reported  
 File Location: Regional Board  
 Potential Contaminants of Concern: Diesel  
 Potential Media Affected: Soil  
 How Discovered: Tank Closure  
 How Discovered Description: Not Reported  
 Stop Method: Not Reported  
 Stop Method Description: Not Reported  
 Action Date: 2002-12-03  
 Action Type: ENFORCEMENT  
 Action: Closure/No Further Action Letter

Action Date: 2002-11-25  
 Action Type: ENFORCEMENT  
 Action: File review

Action Date: 2002-02-01  
 Action Type: ENFORCEMENT

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
FIRE STATION 8			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	231312
ADDRESS			CITY	ZIP
501 NO NEWHOPE			SANTA ANA	92703

## DETAILS

Note: ID has been assigned by ERS  
 Tank Details:  
<http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E7D0.pdf>  
 County: Orange

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-USTReg-CA	Listed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
SANTA ANA FIRE STATION #8			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1215828
ADDRESS			CITY	ZIP
501 N NEWHOPE			SANTA ANA	92703
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.14 miles NW	71 ft (0 ft higher than site)	<b>3</b>
SITE NAME			MAPS	ID
SANTA ANA FIRE STATION #8			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902293
ADDRESS			CITY	ZIP
501 N NEWHOPE ST			SANTA ANA	92703

## DETAILS

### Sites Details

#### URL:

[http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0605902293](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605902293)

Global ID: T0605902293

Case Type: LUST Cleanup Site

Status: Completed - Case Closed

Status Date: 12/3/2002

CUF Case: NO

Lead Agency: SANTA ANA RWQCB (REGION 8)

Case Worker: NOM

Local Agency: SANTA ANA, CITY OF

RB Case Number: 083003476T

Loc Case Number: Not Reported

File Location: Regional Board

Potential Contaminants of Concern: Diesel

Potential Media Affected: Soil

Site History: Not Reported

Begin Date: 8/5/1998

How Discovered: Tank Closure

How Discovered Description: Not Reported

Stop Method: Not Reported

Stop Method Description: Not Reported

Agency Provided Latitude: 33.749052

Agency Provided Longitude: -117.928486

### Regulatory Activities Details

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
SDWIS-US	Changed from public to non-public	0.15 miles NE	72 ft (1 ft higher than site)	<b>4</b>
SITE NAME			MAPS	ID
CAL VA DAIRY			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CA3000960
ADDRESS			CITY	ZIP
4226 W 005TH ST			SANTA ANA	92703



## DETAILS

Public Water  
PWS ID: CA3000960  
Address Line2: 4226 W 005TH ST  
Primary Source Code: GW  
PWS Deactivation Date: 09-JUN-2009

Water System and Admin Contact  
EPA Region: 09  
PWS Activity Status: Changed from public to non-public  
PWS Type: Non-Transient non-community system  
Population Served Count: 100  
Submission Status: Y  
Pop Cat 5: <=500  
Pop Cat 11: <=100  
Organization Name: -  
Admin Name: CAL VA DAIRY  
Phone Number: -  
Fax Number: -  
Contact Address: CAL VA DAIRY  
Contact Address 2: 4226 W 005TH ST  
Country Code: US

Enforcements  
: Not Reported  
Violations

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Cleaners	Listed	0.15 miles S	68 ft (3 ft lower than site)	<b>5</b>
SITE NAME			MAPS	ID
SAMS CLEANERS			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	323015-PD
ADDRESS			CITY	ZIP
4417 W 1ST ST			SANTA ANA	92703-4016
DETAILS				
Listing Year: 1997 SIC Category: CLEANERS SIC Code: 721201				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.16 miles SW	70 ft (1 ft lower than site)	<b>6</b>
SITE NAME			MAPS	ID
G AND M OIL / (CHEVRON)			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6479127
ADDRESS			CITY	ZIP
4505 01ST STREET, WEST			SANTA ANA	92703
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G & M OIL CO, LLC #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC-52835
ADDRESS			CITY	ZIP
4505 W FIRST ST			SANTA ANA	92703

## DETAILS

### Toxic Facility Information

Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID

Facility ID: 52835

Database Year: 2015

Air Basin: SC

County Code: 30

District Code: SC

District: SOUTH COAST AQMD

Facility SIC Code: 5541

COID: ORA

Prioritization Thresholds: Not Reported

Health Risk Assessment (HRA): Not Reported

Non-Cancer Chronic Hazard Index: Not Reported

Non-Cancer Acute Hazard Index: Not Reported

CHAPIS: Not Reported

CERR Code: Not Reported

### Pollutant Information

: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G & M OIL CO, LLC #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	52835-SC
ADDRESS			CITY	ZIP
4505 W FIRST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=52835](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=52835)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 52835  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: JENNIFER  
 Facility Representative Last Name: GRAY  
 Location Area Code: 714  
 Location Phone Number: 3754700  
 Location Phone Extension: 324  
 Mailing Address: 16868 A LN  
 Mailing City: HUNTINGTON BEACH  
 Mailing State: CA  
 Mailing Zip Code: 92647  
 Mailing Zip Code Extension: 4831  
 Mailing Area Code: 714  
 Mailing Phone Number: 3754700  
 Mailing Phone Extension: 324  
 Mailing Representative First Name: JENNIFER  
 Mailing Representative Last Name: GRAY

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M Oil Co. #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10138221
ADDRESS			CITY	ZIP
4505 W 1st St			Santa Ana	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10138221  
 Facility ID: Not Reported  
 Facility Regulator Key ID: Not Reported  
 Organization Code: 90000061  
 Business/Organization Name: G&M Oil Co.  
 Multiple Jurisdictional Business? (Y/N): Yes  
 Business Origin: Business  
 Count of Business' CERS User Accounts: 10  
 Facility Count for Business: 160  
 Last Submittal Date (any element): 11/11/2016 5:03:29 PM  
 Count of Submitted Elements: 62  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: 4  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
City-UST-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
CHEVRON (G&M OIL) # 30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	81-ORG-SNA
ADDRESS			CITY	ZIP
4505 W. 1st			Santa Ana	92703

DETAILS				
County: Orange City: Santa Ana City Responsible Agency: City of Santa Ana, Public Works Agency Note: This is an ERS assigned Autonumber ID. Number of Tanks: 4				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M OIL CO #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0035327-ORG
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703

DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0035327 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-UST-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M OIL CO #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0035327-ORG
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703

DETAILS
<p>County: Orange</p> <p>Responsible Agency: Orange County, Environmental Health Division</p> <p>Facility ID: FA0035327</p> <p>Record ID: Not Reported</p> <p>Released Substance(s): Not Reported</p> <p>Current Status: Not Reported</p> <p>Current Status Date: Not Reported</p> <p>Type of Closure: Not Reported</p> <p>Agency Provided Longitude: Not Reported</p> <p>Agency Provided Latitude: Not Reported</p>

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	7
SITE NAME			MAPS	ID
G & M OIL #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	239450
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703

DETAILS
<p>Site Regulated Program Information</p> <p>Site ID: 239450</p> <p>Site EI ID: T0605901845</p> <p>Agency Provided Latitude: 33.745367</p> <p>Agency Provided Longitude: -117.929157</p> <p>Program Description: Leaking Underground Storage Tank Cleanup Site</p> <p>Evaluation Information</p> <p>: Not Reported</p> <p>: Violation Information</p> <p>: Not Reported</p> <p>: Enforcement Information</p> <p>: Not Reported</p> <p>: Chemical Information</p> <p>: Not Reported</p> <p>: Coordinate Information</p> <p>: Not Reported</p> <p>:</p>



DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M Oil Co. #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	118542
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703
DETAILS				
<p>Site Regulated Program Information</p> <p>Site ID: 118542</p> <p>Site EI ID: 10138221</p> <p>Agency Provided Latitude: 33.745434</p> <p>Agency Provided Longitude: -117.929161</p> <p>Program Description: Chemical Storage Facilities</p> <p>Program Description: Hazardous Waste Generator</p> <p>Program Description: Underground Storage Tank</p> <p>Evaluation Information</p> <p>Evaluation Date: 5/7/2018</p> <p>Violations Found? (Y/N): Yes</p> <p>Evaluation General Type: Compliance Evaluation Inspection</p> <p>Evaluation Type: Routine done by local agency</p> <p>Evaluation Note(s): On site for routine UST inspection, monitoring system certification and spill bucket testing. Site has the following USTs monitored by a TLS-350 panel: -12,000 gal 87 -10,000 gal 91 -10,000 gal DSL -10,000 gal E-85 (Petroleum Blend Fuel) All tanks have flapper valves for overfill protection. All tank annulars are monitored by VR344 sensors. The E-85 fill sump, STP sump and associated UDCs are monitored by VR323. All other containment sumps are monitored by VR208 sensors. Positive shutdown and fail safe system were tested and verified. Secondary containment test last completed on 7/10/17. Monitoring certification was conducted by Rodney Bredeson of Tank-Tek. All certs (VMI, ICC and VR) were verified. 87 and 91 LLD were tested after inspector departure. Please submit test results to this agency within 30 days.</p> <p>Evaluation Division: Orange County Environmental Health</p> <p>Evaluation Program: UST</p> <p>Evaluation Source: CERS</p> <p>Evaluation Date: 3/26/2018</p> <p>Violations Found? (Y/N): No</p> <p>Evaluation General Type: Compliance Evaluation Inspection</p> <p>Evaluation Type: Routine done by local agency</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G & M OIL #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703
DETAILS				
<p>Global ID: T0605901845  County: Orange  Site History: Semi Annual Status report submitted during the second quarter 2012 dated July 24, 2012 shows concentration of TBA in two wells as 1450 and 1470 ug/L, respectively. These levels of contamination are above the Regional Board (RB) water quality objective. Therefore, board staff disagrees with the Cleanup Fund proposal to close this site at this time.  Case Type: LUST Cleanup Site  Status: Completed - Case Closed  Lead Agency: SANTA ANA RWQCB (REGION 8)  Case Worker: MAO  Local Agency: SANTA ANA, CITY OF  RB Case Number: 083002662T  Loc Case Number: Not Reported  File Location: Regional Board  Potential Contaminants of Concern: Gasoline  Potential Media Affected: Aquifer used for drinking water supply  How Discovered: Other Means  How Discovered Description: Not Reported  Stop Method: Not Reported  Stop Method Description: Not Reported  Action Date: 2015-12-10  Action Type: ENFORCEMENT  Action: Technical Correspondence / Assistance / Other</p> <p>Action Date: 2014-01-28  Action Type: ENFORCEMENT  Action: State Water Board û Closure Order</p> <p>Action Date: 2013-10-04  Action Type: ENFORCEMENT  <a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
CHEVRON (G&M OIL)			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	210967
ADDRESS			CITY	ZIP
4505 W. 1ST			SANTA ANA	92703
DETAILS				
AS OF DATE: 7/18/2001 SITE TYPE: RETAIL TANK TYPE: UST COUNTY: ORANGE				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
Chevron			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	155776
ADDRESS			CITY	ZIP
4505 W 1st St			Santa Ana	92703
DETAILS				
Site Added: 1/1/2013				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
STATION 004			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	267458
ADDRESS			CITY	ZIP
4505 W FIRST ST			SANTA ANA	92703

DETAILS
<p>Note: ID has been assigned by ERS</p> <p>Tank Details:</p> <p><a href="http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E68F.pdf">http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E68F.pdf</a></p> <p>County: Orange</p>

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-Cleanup-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
Not Reported by Agency			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845
ADDRESS			CITY	ZIP
4505 1ST ST W			SANTA ANA	

DETAILS
<p>UST FUND PRIORITY CLASS: C</p> <p>UST FUND CLAIM NO#: 17126</p> <p>GEOGRAPHIC AREA (BY REGIONAL BOARD NO#): 8</p> <p>UST FUND CLAIM_CLOSURE DATE: Not Reported</p> <p>NO# OF FUND RECOMMENDED CLOSURE: 1</p> <p>SITE LEAD AGENCY: SANTA ANA RWQCB (REGION 8)</p> <p>YEARS CASE HAS BEEN OPENED: 17</p> <p>YEARS CLAIM HAS RECEIVED FUNDING: 9</p>

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-USTReg-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G & M OIL CO INC #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	4016269
ADDRESS			CITY	ZIP
4505 W 1ST			SANTA ANA	92703

DETAILS
<p>Reported Date: 1998</p>

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.16 miles SW	69 ft (2 ft lower than site)	7
SITE NAME			MAPS	ID
G & M OIL #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605901845
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703
DETAILS				
<p>Sites Details</p> <p>URL:  <a href="http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901845">http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901845</a>  Global ID: T0605901845  Case Type: LUST Cleanup Site  Status: Completed - Case Closed  Status Date: 1/28/2014  CUF Case: YES  Lead Agency: SANTA ANA RWQCB (REGION 8)  Case Worker: MAO  Local Agency: SANTA ANA, CITY OF  RB Case Number: 083002662T  Loc Case Number: Not Reported  File Location: Regional Board  Potential Contaminants of Concern: Gasoline  Potential Media Affected: Aquifer used for drinking water supply  Site History: Semi Annual Status report submitted during the second quarter 2012 dated July 24, 2012 shows concentration of TBA in two wells as 1450 and 1470 ug/L, respectively. These levels of contamination are above the Regional Board (RB) water quality objective. Therefore, board staff disagrees with the Cleanup Fund proposal to close this site at this time.  Begin Date: 4/14/1995  How Discovered: Other Means  How Discovered Description: Not Reported  Stop Method: Not Reported  Stop Method Description: Not Reported  Agency Provided Latitude: 33.745366835  Agency Provided Longitude: -117.929157</p> <p>Regulatory Activities Details</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G & M OIL CO INC #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000004961
ADDRESS			CITY	ZIP
4505 W FIRST			SANTA ANA	92703
DETAILS				
<p>Additional details may be found online using the following link:</p> <p><a href="http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000004961&amp;pgm_sys_acnm_in=RCRAINFO">http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000004961&amp;pgm_sys_acnm_in=RCRAINFO</a></p> <p>Source Type: Implementer  Generator Status Universe: N  Generator Status: Non-Generator  NAICS1: OTHER GASOLINE STATIONS  Active Site Indicator: H----  Owner Name: G &amp; M OIL CO LLC  Operator Name: SOLEDAD GERMAN  In Handler Universes: Y  In a Universe: Y  Short Term Generator: N  Importer Activity: N  Mixed Waste Generator: N  Transporter Activity: Y  Transfer Facility: N  Recycler Activity: N  Onsite Burner Exemption: N  Furnace Exemption: N  Underground Injection Activity: N  Receives Waste From Off-site: N  Universal Waste: N  Universal Waste Destination Facility: Y  Used Oil Universe: NNNNNNN  Federal Universal Waste: N  Active Site Federally Regulated TSDF: -----</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M Oil Co. #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	144502
ADDRESS			CITY	ZIP
4505 W 1st St			Santa Ana	92703
DETAILS				
<p>More Information on Site? Go to Following Link:  <a href="http://geotracker.waterboards.ca.gov/search.asp">http://geotracker.waterboards.ca.gov/search.asp</a>            CERSID: 10138221            Global ID: FA0035327            COUNTY: Orange            Permitting Agency: Orange County Environmental Health            Agency Provided Latitude: 33.74543            Agency Provided Longitude: -117.92916            PROJECT TYPE: Not Reported            RB Case Number: Not Reported            LOC Case Number: Not Reported            Case Worker: Not Reported            MTBE DATE: Not Reported            GW CONC (PPB): Not Reported            MATRIX: Not Reported</p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-Closed-CA	Closed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M Oil #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1408
ADDRESS			CITY	ZIP
4505 1st St. W.			Santa Ana	92703



## DETAILS

NOTE: This is an ERS assigned ID  
Case - Claim No: Claim No. 17126  
Deadline To Receive Comments: 2013/12/11  
Site Name: G&M Oil #30  
Site Address: 4505 1st St. W.  
City: Santa Ana  
County: Not Reported  
State: CA  
Zip: 92703  
Documents: Notice, Exec;Draft Order, Final Closure Summary  
Written Comments Received: docs/prop\_closure\_cases/17126cmmnts.pdf  
Closure Denials and Approved Orders:  
[https://geotracker.waterboards.ca.gov/regulators/deliverable\\_documents/5908737003/WQO%202014-0010-UST.pdf](https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/5908737003/WQO%202014-0010-UST.pdf)  
Uniform: x

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-CRSP-CA	Listed	0.16 miles SW	69 ft (2 ft lower than site)	<b>7</b>
SITE NAME			MAPS	ID
G&M Oil Co. #30			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	118542
ADDRESS			CITY	ZIP
4505 W 1ST ST			SANTA ANA	92703

## DETAILS

### Site Regulated Program Information

Site ID: 118542

Site EI ID: 10138221

Agency Provided Latitude: 33.745434

Agency Provided Longitude: -117.929161

Program Description: Underground Storage Tank

### Evaluation Information

Evaluation Date: 5/7/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for routine UST inspection, monitoring system certification and spill bucket testing. Site has the following USTs monitored by a TLS-350 panel: -12,000 gal 87 -10,000 gal 91 -10,000 gal DSL -10,000 gal E-85 (Petroleum Blend Fuel) All tanks have flapper valves for overfill protection. All tank annulars are monitored by VR344 sensors. The E-85 fill sump, STP sump and associated UDCs are monitored by VR323. All other containment sumps are monitored by VR208 sensors. Positive shutdown and fail safe system were tested and verified. Secondary containment test last completed on 7/10/17. Monitoring certification was conducted by Rodney Bredeson of Tank-Tek. All certs (VMI, ICC and VR) were verified. 87 and 91 LLD were tested after inspector departure. Please submit test results to this agency within 30 days.

Evaluation Division: Orange County Environmental Health

Evaluation Program: UST

Evaluation Source: CERS

Evaluation Date: 3/26/2018

Violations Found? (Y/N): No

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): Walked through the site and the perimeter. Checked trash cans and dumpster at the site. Observed the following hazardous wastes: - Waste Water & Fuel, (1) 55 gallon drum - Waste Absorbent and fuel, (1) 55 gallon drum

Evaluation Division: Orange County Environmental Health

Evaluation Program: HW

Evaluation Source: CERS

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
HWT-CA	Listed	0.17 miles N	71 ft (0 ft higher than site)	<b>8</b>
SITE NAME			MAPS	ID
LUNO WASTE OIL			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6117
ADDRESS			CITY	ZIP
4322 W. SILVER DRIVE			SANTA ANA	92703

### DETAILS

URL:  
[http://hwts.dtsc.ca.gov/hwts\\_Reports/ReportPages/Report04.aspx?trans=6117](http://hwts.dtsc.ca.gov/hwts_Reports/ReportPages/Report04.aspx?trans=6117)  
 Registration Number: 6117  
 Registration Date: 9/8/2017  
 Expiration Date: 9/30/2018  
 Last Updated: 10/1/2018  
 Record Entered: 8/14/2012  
 Standing Flag: Expired  
 County: LOS ANGELES  
 Mailing Address: P.O. BOX 14211 VAN NUYS, CA 91409  
 Contact: JOSE G. LUEVANO  
 Position: OWNER  
 Contact Number: 8183771477  
 Owner(s): JOSE G. LUEVANO LUIS A. LUEVANO  
 EPA ID(s): CAL000376031 CAL000428703

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.17 miles S	68 ft (3 ft lower than site)	<b>9</b>
SITE NAME			MAPS	ID
SUPERIOR PROPANE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	6714536
ADDRESS			CITY	ZIP
4426 01ST STREET, WEST			SANTA ANA	
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.18 miles SW	70 ft (1 ft lower than site)	<b>10</b>
SITE NAME			MAPS	ID
SANDFROG, LLC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC-108933
ADDRESS			CITY	ZIP
4521 W 1ST ST #B			SANTA ANA	92703

## DETAILS

### Toxic Facility Information

Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID

Facility ID: 108933

Database Year: 2015

Air Basin: SC

County Code: 30

District Code: SC

District: SOUTH COAST AQMD

Facility SIC Code: 3471

COID: ORA

Prioritization Thresholds: Not Reported

Health Risk Assessment (HRA): Not Reported

Non-Cancer Chronic Hazard Index: Not Reported

Non-Cancer Acute Hazard Index: Not Reported

CHAPIS: Not Reported

CERR Code: Not Reported

### Pollutant Information

: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles SW	70 ft (1 ft lower than site)	<b>10</b>
SITE NAME			MAPS	ID
SANDFROG, LLC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	108933-SC
ADDRESS			CITY	ZIP
4521 W 1ST ST #B			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=108933](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=108933)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 108933  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 6  
 Location Zip Code Extension: 3199  
 Facility Representative First Name: DALLAS L  
 Facility Representative Last Name: COTE  
 Location Area Code: 714  
 Location Phone Number: 7757374  
 Location Phone Extension: Not Reported  
 Mailing Address: 4521 W 1ST ST #B  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3199  
 Mailing Area Code: 714  
 Mailing Phone Number: 7757374  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: DALLAS L  
 Mailing Representative Last Name: COTE

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
CITY OF SANTA ANA, PUBLIC WORKS AGENCY			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	162383-SC
ADDRESS			CITY	ZIP
4426 W FIRST ST			SANTA ANA	92701

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=162383](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=162383)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 162383  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: NABIL  
 Facility Representative Last Name: SABA  
 Location Area Code: 714  
 Location Phone Number: 6473378  
 Location Phone Extension: Not Reported  
 Mailing Address: 220 S DAISY AVE  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 6473378  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: NABIL  
 Mailing Representative Last Name: SABA

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
WEST STATION			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	178939-SC
ADDRESS			CITY	ZIP
4426 W 1ST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=178939](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=178939)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 178939  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: CESAR  
 Facility Representative Last Name: BARRERA  
 Location Area Code: 714  
 Location Phone Number: 6473387  
 Location Phone Extension: Not Reported  
 Mailing Address: 220 S DAISY  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 6473387  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: CESAR  
 Mailing Representative Last Name: BARRERA

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
LP			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10543402
ADDRESS			CITY	ZIP
4426 W 1ST ST A&B			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10543402  
 Facility ID: FA0035326  
 Facility Regulator Key ID: FA0035326  
 Organization Code: 90484852  
 Business/Organization Name: LP  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
GW Cleanup-S.A., 1st St.			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	351030
ADDRESS			CITY	ZIP
4426 FIRST			SANTA ANA	92703



## DETAILS

**Site Regulated Program Information**

Site ID: 351030

Site EI ID: 228458

Agency Provided Latitude: 33.745116

Agency Provided Longitude: -117.927967

Program Description: NPDES Wastewater and Stormwater

**Evaluation Information**

: Not Reported

: Violation Information

: Not Reported

: Enforcement Information

: Not Reported

: Chemical Information

: Not Reported

: Coordinate Information

: Not Reported

:

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
SUPERIOR PROPANE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	201077
ADDRESS			CITY	ZIP
4426 W 1ST ST			SANTA ANA	92703

## DETAILS

### Site Regulated Program Information

Site ID: 201077

Site EI ID: T0605902011

Agency Provided Latitude: 33.74463

Agency Provided Longitude: -117.928465

Program Description: Leaking Underground Storage Tank Cleanup Site

### Evaluation Information

: Not Reported

: Violation Information

: Not Reported

: Enforcement Information

: Not Reported

: Chemical Information

: Not Reported

: Coordinate Information

: Not Reported

:

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
SUPERIOR PROPANE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902011
ADDRESS			CITY	ZIP
4426 W 1ST ST			SANTA ANA	92703

## DETAILS

Global ID: T0605902011  
 County: Orange  
 Site History: Not Reported  
 Case Type: LUST Cleanup Site  
 Status: Completed - Case Closed  
 Lead Agency: SANTA ANA RWQCB (REGION 8)  
 Case Worker: VJB  
 Local Agency: SANTA ANA, CITY OF  
 RB Case Number: 083002939T  
 Loc Case Number: Not Reported  
 File Location: Not Reported  
 Potential Contaminants of Concern: Gasoline  
 Potential Media Affected: Aquifer used for drinking water supply  
 How Discovered: Tank Closure  
 How Discovered Description: Not Reported  
 Stop Method: Not Reported  
 Stop Method Description: Not Reported  
 Action Date: 2004-08-09  
 Action Type: ENFORCEMENT  
 Action: Closure/No Further Action Letter  
  
 Action Date: 2004-07-06  
 Action Type: ENFORCEMENT  
 Action: Notification - Public Notice of Case Closure  
  
 Action Date: 2004-06-09  
 Action Type: ENFORCEMENT

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Eval-Hist-Other-CA	Refer: RWQCB	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
HUGH'S SERVICE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	30130175
ADDRESS			CITY	ZIP
4426 W 1ST STREET			SANTA ANA	92704

## DETAILS

URL:  
[http://www.envirostor.dtsc.ca.gov/public/profile\\_report.asp?global\\_id=30130175](http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=30130175)  
 Envirostor ID: 30130175  
 County: ORANGE  
 Site Type: Historical  
 Site Type Detailed: \* Historical  
 Acres: Not Reported  
 APN: NONE SPECIFIED  
 National Priorities List: NO  
 Lead Agency: NONE SPECIFIED  
 Project Manager: Not Reported  
 Supervisor: \* Mmonroy  
 Division Branch: Cleanup Cypress  
 Site Code: Not Reported  
 Assembly: 72  
 Senate: 34  
 Congressional District: 48  
 Special Program: Not Reported  
 Status: Refer: RWQCB  
 Status Date: 1995-05-10 00:00:00  
 Past Uses: NONE SPECIFIED  
 Restricted Use: NO  
 Funding: Not Reported  
 Regulatory Agencies Involved: NONE SPECIFIED  
 Potential Contamination of Concern: 10196  
 Confirmed Contamination of Concern: NONE SPECIFIED  
 Potential Media Affected: NONE SPECIFIED

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CALSITES-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
HUGH'S SERVICE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1162966
ADDRESS			CITY	ZIP
4426 W 1ST STREET			SANTA ANA	92704
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Historical-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
HUGH'S SERVICE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	30130175
ADDRESS			CITY	ZIP
4426 W 1ST STREET			SANTA ANA	92704
DETAILS				
URL: <a href="http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=30130175">http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=30130175</a> Envirostor ID: 30130175 County: ORANGE Agency Provided Latitude: 33.7446284813043 Agency Provided Longitude: -117.928464786029 Program Type: HISTORICAL Status: REFER: RWQCB Status Date: 5/10/1995 Site Code: Not Reported CALENVIROSCREEN SCORE: 61-65%				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
BEE PETROLEUM SERVICE STATION			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	216216
ADDRESS			CITY	ZIP
4426 W FIRST ST			SANTA ANA	92703
DETAILS				
Note: ID has been assigned by ERS Tank Details: <a href="http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002ED0B.pdf">http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002ED0B.pdf</a> County: Orange				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
BEE PETROLEUM CORP			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	216215
ADDRESS			CITY	ZIP
4426 W FIRST ST			SANTA ANA	92703
DETAILS				
<p>Note: ID has been assigned by ERS</p> <p>Tank Details:</p> <p><a href="http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E97B.pdf">http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E97B.pdf</a></p> <p>County: Orange</p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-USTReg-CA	Listed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
BEE PETROLEUM SERVICE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	1253034
ADDRESS			CITY	ZIP
4426 W 1ST			SANTA ANA	92703
DETAILS				
<p>Reported Date: 1998</p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.19 miles S	67 ft (4 ft lower than site)	<b>11</b>
SITE NAME			MAPS	ID
SUPERIOR PROPANE			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	T0605902011
ADDRESS			CITY	ZIP
4426 W 1ST ST			SANTA ANA	92703

## DETAILS

### Sites Details

#### URL:

[http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0605902011](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605902011)

Global ID: T0605902011

Case Type: LUST Cleanup Site

Status: Completed - Case Closed

Status Date: 8/9/2004

CUF Case: YES

Lead Agency: SANTA ANA RWQCB (REGION 8)

Case Worker: VJB

Local Agency: SANTA ANA, CITY OF

RB Case Number: 083002939T

Loc Case Number: Not Reported

File Location: Not Reported

Potential Contaminants of Concern: Gasoline

Potential Media Affected: Aquifer used for drinking water supply

Site History: Not Reported

Begin Date: 10/15/1996

How Discovered: Tank Closure

How Discovered Description: Not Reported

Stop Method: Not Reported

Stop Method Description: Not Reported

Agency Provided Latitude: 33.74463

Agency Provided Longitude: -117.928465

### Regulatory Activities Details

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.19 miles SW	69 ft (2 ft lower than site)	<b>12</b>
SITE NAME			MAPS	ID
H & H AUTO BODY/PAINTS			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	55885-SC
ADDRESS			CITY	ZIP
4525 W FIRST C ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=55885](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=55885)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 55885  
 County Code: OR  
 County: Orange  
 Facility Status Code: S  
 Facility Status: SOLD  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: MOC COC  
 Facility Representative Last Name: HINH  
 Location Area Code: 714  
 Location Phone Number: 8398936  
 Location Phone Extension: Not Reported  
 Mailing Address: 4525 W FIRST C ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 8398936  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: MOC COC  
 Mailing Representative Last Name: HINH

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
CHAU AUTO BODY & REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC-155084
ADDRESS			CITY	ZIP
4525 W 1ST ST STE C			SANTA ANA	92703



## DETAILS

### Toxic Facility Information

Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID

Facility ID: 155084

Database Year: 2015

Air Basin: SC

County Code: 30

District Code: SC

District: SOUTH COAST AQMD

Facility SIC Code: 7532

COID: ORA

Prioritization Thresholds: Not Reported

Health Risk Assessment (HRA): Not Reported

Non-Cancer Chronic Hazard Index: Not Reported

Non-Cancer Acute Hazard Index: Not Reported

CHAPIS: Not Reported

CERR Code: Not Reported

### Pollutant Information

: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
P & B AUTO BODY REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	83349-SC
ADDRESS			CITY	ZIP
4525 W FIRST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=83349](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=83349)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 83349  
 County Code: OR  
 County: Orange  
 Facility Status Code: S  
 Facility Status: SOLD  
 Number of Employees: 0  
 Location Zip Code Extension: 3170  
 Facility Representative First Name: ROGER  
 Facility Representative Last Name: PANG  
 Location Area Code: 714  
 Location Phone Number: 8398936  
 Location Phone Extension: Not Reported  
 Mailing Address: 4525 W FIRST ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3170  
 Mailing Area Code: 714  
 Mailing Phone Number: 8398936  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: ROGER  
 Mailing Representative Last Name: PANG

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
XE AUTOBODY AND REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	136932-SC
ADDRESS			CITY	ZIP
4525 W FIRST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=136932](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=136932)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 136932  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 1  
 Location Zip Code Extension: 3170  
 Facility Representative First Name: STEVE  
 Facility Representative Last Name: NGUYEN  
 Location Area Code: 714  
 Location Phone Number: 5806500  
 Location Phone Extension: Not Reported  
 Mailing Address: 4525 W FIRST ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3170  
 Mailing Area Code: 714  
 Mailing Phone Number: 5806500  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: STEVE  
 Mailing Representative Last Name: NGUYEN

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
CHAU AUTO BODY & REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	155084-SC
ADDRESS			CITY	ZIP
4525 W 1ST ST STE C			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=155084](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=155084)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 155084  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 5  
 Location Zip Code Extension: 3170  
 Facility Representative First Name: WENDY  
 Facility Representative Last Name: BUI  
 Location Area Code: 714  
 Location Phone Number: 7758772  
 Location Phone Extension: Not Reported  
 Mailing Address: 4525 W 1ST ST STE C  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3170  
 Mailing Area Code: 714  
 Mailing Phone Number: 7758772  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: BUI  
 Mailing Representative Last Name: CHAU

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FRANKS COMPUTERIZED AUTO CTR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10539271
ADDRESS			CITY	ZIP
4525 W 1ST ST STE A			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10539271  
 Facility ID: FA0027216  
 Facility Regulator Key ID: FA0027216  
 Organization Code: 90478678  
 Business/Organization Name: FRANKS COMPUTERIZED AUTO CTR  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
ALFA AUTO REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10539259
ADDRESS			CITY	ZIP
4525 W 1ST ST STE B			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10539259  
 Facility ID: FA0027212  
 Facility Regulator Key ID: FA0027212  
 Organization Code: 90478660  
 Business/Organization Name: ALFA AUTO REPAIR  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): 12/12/2016 1:05:07 PM  
 Count of Submitted Elements: 3  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: 0  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
CHAU AUTO BODY & PAINT			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10523911
ADDRESS			CITY	ZIP
4525 W 1ST ST STE C			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10523911  
 Facility ID: FA0046747  
 Facility Regulator Key ID: FA0046747  
 Organization Code: 90454882  
 Business/Organization Name: CHAU AUTO BODY & PAINT  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
BEN BI AUTO BODY & REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0046747-ORG
ADDRESS			CITY	ZIP
4525 W 1ST ST STE C			SANTA ANA	92703

DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0046747 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FRANKS COMPUTERIZED AUTO CTR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0027216-ORG
ADDRESS			CITY	ZIP
4525 W 1ST ST STE A			SANTA ANA	92703

DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0027216 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
ALFA AUTO REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0027212-ORG
ADDRESS			CITY	ZIP
4525 W 1ST ST STE B			SANTA ANA	92703



## DETAILS

County: Orange  
 Responsible Agency: Orange County Environmental Health  
 Type of Listing: Hazardous Waste Facilities  
 Facility ID: FA0027212  
 Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FRANKS COMPUTERIZED AUTO CTR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	439941
ADDRESS			CITY	ZIP
4525 W 1ST ST STE A			SANTA ANA	92703

## DETAILS

### Site Regulated Program Information

Site ID: 439941

Site EI ID: 10539271

Agency Provided Latitude: 33.74552

Agency Provided Longitude: -117.93005

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

### Evaluation Information

Evaluation Date: 8/16/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for routine Hazardous Waste inspection. Facility underwent a change of ownership on 7/31/18. Observed the following hazardous wastes on site: - 360 gal of used oil (120 gal aboveground tank + 240 gal aboveground tank) - 55 gal waste antifreeze - 55 gal drum of metal oil filters - 55 gal drum of paper oil filters Reviewed waste manifests. Checked perimeter of facility and trash cans.

Evaluation Division: Orange County Environmental Health

Evaluation Program: HW

Evaluation Source: CERS

Evaluation Date: 8/16/2018

Violations Found? (Y/N): No

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for routine Hazardous Materials Business Plan inspection. Facility underwent ownership change on 7/31/18. Facility has the following hazardous materials on site in reportable quantities (all sizes are approximate): - 360 gal of used oil (120 gal aboveground tank + 240 gal aboveground tank) - 480 gal of new oil (two 240 gal aboveground tanks) - 55 gal waste antifreeze Per California Health and Safety Code Ch. 6.95, all facilities that store and handle hazardous materials in reportable quantities (55 gal of a liquid, 500 lbs of a solid, 200 cubic feet of a compressed gas) must prepare and implement a Hazardous Materials Business Plan (HMBP) which includes the following: a chemical inventory, facility site map, Emergency Response Plan and Training Plan. The HMBP must be submitted electronically through the California Environmental Reporting System (CERS - <http://cers.calepa.ca.gov>) and must be renewed by March 1st of every year. Please create an account [Truncated]

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
ALFA AUTO REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	413991
ADDRESS			CITY	ZIP
4525 W 1ST ST STE B			SANTA ANA	92703

## DETAILS

### Site Regulated Program Information

Site ID: 413991

Site EI ID: 10539259

Agency Provided Latitude: 33.74552

Agency Provided Longitude: -117.93005

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

### Evaluation Information

Evaluation Date: 11/3/2016

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): INSPECTOR COMMENTS: On site for a routine Hazardous Materials and Business Emergency Plan (HMBEP) inspection. Consent to enter and inspect was given by John Nguyen. Observed the facility and inspection hazardous materials storage. The following materials were observed in amounts that meet or exceed the minimum volumes required for disclosure: - Used Oil, 355 gallons - New Oil, 55 gallons The business has submitted their HMBEP to eSubmit. Business emergency plan was not maintained on site, but was provided. The business does not have employee training documentation. Spoke to John about topics to train on for employee safety and how to maintain documentation. The facility is responsible for identifying all hazardous materials, to include hazardous wastes, which are above disclosure thresholds (55 gallons liquid, 200 cubic feet compressed gas, 500 pounds solid). If there is a change in the type or amount of chemicals that are maintained on site, please submit [Truncated]

Evaluation Division: Orange County Environmental Health

Evaluation Program: HMRRP

Evaluation Source: CERS

Evaluation Date: 11/3/2016

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): INSPECTOR COMMENTS: On site for a routine hazardous waste inspection. Consent to inspect and take any necessary photos was given by John Nguyen, Manager. Walked throughout the facility and observed hazardous waste storage areas. Containers were closed, but not labeled. Labels were provided and placed on containers with the start date of accumulation being the last time waste was hauled on 9/15/16. Manifests were available and reviewed. Employees are reported to be trained. Emergency plan is not maintained. A perimeter walk was conducted. The business shares a dumpster with two neighboring businesses. No signs of illegal dumping were observed. No outstanding hazardous waste violations were observed this date. A copy of this inspection report was sent to John Nguyen at toan17@gmail.com.

Evaluation Division: Orange County Environmental Health

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
P & B AUTO BODY REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	530689-PD
ADDRESS			CITY	ZIP
4525 W 1ST ST			SANTA ANA	92703-3170

DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE BODY-REPAIRING & PAINTING SIC Code: 753201				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
ALFA AUTO REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	373855-PD
ADDRESS			CITY	ZIP
4525 W 1ST ST # B			SANTA ANA	92703-3170

DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FRANKS COMPUTERIZED AUTO CTR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	440061-PD
ADDRESS			CITY	ZIP
4525 W 1ST ST # A			SANTA ANA	92703-3170

DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FRANK'S COMPUTERIZED AUTO CENTER			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000438618
ADDRESS			CITY	ZIP
4525 W 1ST ST STE A			SANTA ANA	92703
DETAILS				
<p>Additional details may be found online using the following link:</p> <p><a href="http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000438618&amp;pgm_sys_acnm_in=RCRAINFO">http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAL000438618&amp;pgm_sys_acnm_in=RCRAINFO</a></p> <p>Source Type: Implementer  Generator Status Universe: N  Generator Status: Non-Generator  NAICS1: GENERAL AUTOMOTIVE REPAIR  Active Site Indicator: H----  Owner Name: THANHXAN THI NGUYEN  Operator Name: BILL NG  In Handler Universes: Y  In a Universe: Y  Short Term Generator: N  Importer Activity: N  Mixed Waste Generator: N  Transporter Activity: Y  Transfer Facility: N  Recycler Activity: N  Onsite Burner Exemption: N  Furnace Exemption: N  Underground Injection Activity: N  Receives Waste From Off-site: N  Universal Waste: N  Universal Waste Destination Facility: Y  Used Oil Universe: NNNNNNN  Federal Universal Waste: N  Active Site Federally Regulated TSDF: -----</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.2 miles SW	72 ft (1 ft higher than site)	<b>13</b>
SITE NAME			MAPS	ID
FIRST AUTO BODY & RPR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAD982016818
ADDRESS			CITY	ZIP
4525 W 1ST ST UNIT C			SANTA ANA	92703
DETAILS				
<p>Additional details may be found online using the following link:</p> <p><a href="http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=CAD982016818&amp;pgm_sys_acrnm_in=RCRAINFO">http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=CAD982016818&amp;pgm_sys_acrnm_in=RCRAINFO</a></p> <p>Source Type: Notification  Generator Status Universe: SQG  Generator Status: Small Quantity Generator  Active Site Indicator: H----  Owner Name: HINH MOC  Operator Name: NOT REQUIRED  In Handler Universes: Y  In a Universe: Y  Short Term Generator: N  Importer Activity: N  Mixed Waste Generator: N  Transporter Activity: N  Transfer Facility: N  Recycler Activity: N  Onsite Burner Exemption: N  Furnace Exemption: N  Underground Injection Activity: N  Receives Waste From Off-site: N  Universal Waste: N  Universal Waste Destination Facility: N  Used Oil Universe: NNNNNNN  Federal Universal Waste: N  Active Site Federally Regulated TSDF: -----  Active Site Converter TSDF: -----</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.2 miles NE	73 ft (2 ft higher than site)	<b>14</b>
SITE NAME			MAPS	ID
KENS OIL CO INC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAD046591392
ADDRESS			CITY	ZIP
4108 W FIFTH ST			SANTA ANA	92703
DETAILS				
<p>Additional details may be found online using the following link:</p> <p><a href="http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD046591392&amp;pgm_sys_acnm_in=RCRAINFO">http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=CAD046591392&amp;pgm_sys_acnm_in=RCRAINFO</a></p> <p>Source Type: Notification  Generator Status Universe: N  Generator Status: Non-Generator  NAICS1: GENERAL FREIGHT TRUCKING, LOCAL  Active Site Indicator: H----  Owner Name: KENNETH E AND KENNETH P SCHOW  Operator Name: NOT REQUIRED  In Handler Universes: Y  In a Universe: Y  Short Term Generator: N  Importer Activity: N  Mixed Waste Generator: N  Transporter Activity: Y  Transfer Facility: N  Recycler Activity: N  Onsite Burner Exemption: N  Furnace Exemption: N  Underground Injection Activity: N  Receives Waste From Off-site: N  Universal Waste: N  Universal Waste Destination Facility: N  Used Oil Universe: NNNNNNN  Federal Universal Waste: N  Active Site Federally Regulated TSDF: -----</p> <p><a href="#">More Details Link</a></p>				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.21 miles S	68 ft (3 ft lower than site)	<b>15</b>
SITE NAME			MAPS	ID
ALS TRUCK REPAIR SVC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	376717-PD
ADDRESS			CITY	ZIP
201 S MOUNTAIN VIEW ST			SANTA ANA	92704-1233
DETAILS				
Listing Year: 1997 SIC Category: TRUCK-REPAIRING & SERVICE SIC Code: 753812				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO ONE AUTO BODY SHOP, INC.			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC-135879
ADDRESS			CITY	ZIP
4609 W FIRST ST			SANTA ANA	92703



## DETAILS

### Toxic Facility Information

Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID

Facility ID: 135879

Database Year: 2015

Air Basin: SC

County Code: 30

District Code: SC

District: SOUTH COAST AQMD

Facility SIC Code: 7539

COID: ORA

Prioritization Thresholds: Not Reported

Health Risk Assessment (HRA): Not Reported

Non-Cancer Chronic Hazard Index: Not Reported

Non-Cancer Acute Hazard Index: Not Reported

CHAPIS: Not Reported

CERR Code: Not Reported

### Pollutant Information

: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PHU'S AUTO BODY & REPAIRING			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	SC AQMD-SC-143881
ADDRESS			CITY	ZIP
4609 W FIRST ST # C			SANTA ANA	92703

## DETAILS

### Toxic Facility Information

Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID

Facility ID: 143881

Database Year: 2015

Air Basin: SC

County Code: 30

District Code: SC

District: SOUTH COAST AQMD

Facility SIC Code: 9999

COID: ORA

Prioritization Thresholds: Not Reported

Health Risk Assessment (HRA): Not Reported

Non-Cancer Chronic Hazard Index: Not Reported

Non-Cancer Acute Hazard Index: Not Reported

CHAPIS: Not Reported

CERR Code: Not Reported

### Pollutant Information

: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
THE CAR SHOP			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	60236-SC
ADDRESS			CITY	ZIP
4609 FIRST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=60236](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=60236)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 60236  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: 3170  
 Facility Representative First Name: Not Reported  
 Facility Representative Last Name: Not Reported  
 Location Area Code: Not Reported  
 Location Phone Number: Not Reported  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 FIRST ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3170  
 Mailing Area Code: Not Reported  
 Mailing Phone Number: Not Reported  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: Not Reported  
 Mailing Representative Last Name: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
LEONS AUTO BODY SHOP, MANUEL FERNANDES			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	98957-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST #A			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=98957](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=98957)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 98957  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 4  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: MANUEL  
 Facility Representative Last Name: FERNANDEZ  
 Location Area Code: 714  
 Location Phone Number: 5311217  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST #A  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 5311217  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: MANUEL  
 Mailing Representative Last Name: FERNANDEZ

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
CN AUTO BODY AND PAINT			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	158583-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST #B			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=158583](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=158583)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 158583  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: CHAU  
 Facility Representative Last Name: NGUYEN  
 Location Area Code: 714  
 Location Phone Number: 7756926  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST #B  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 7756926  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: CHAU  
 Mailing Representative Last Name: NGUYEN

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
LEON'S AUTO BODY SHOP			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	66159-SC
ADDRESS			CITY	ZIP
4609 W 1ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=66159](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=66159)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 66159  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: 3170  
 Facility Representative First Name: ALBERTO  
 Facility Representative Last Name: NALA  
 Location Area Code: 714  
 Location Phone Number: 5311217  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W 1ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: 3170  
 Mailing Area Code: 714  
 Mailing Phone Number: 5311217  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: ALBERTO  
 Mailing Representative Last Name: NALA

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
FIRST AUTO BODY REPAIR & PAINT, C NGUYEN			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	112501-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST # C			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=112501](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=112501)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 112501  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: CHAU  
 Facility Representative Last Name: NGUYEN  
 Location Area Code: 714  
 Location Phone Number: 8392908  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST # C  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 8392908  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: CHAU  
 Mailing Representative Last Name: NGUYEN

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
TRIPLE GENERAL AUTO			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	62362-SC
ADDRESS			CITY	ZIP
4609 W 1ST ST #C			SANTA ANA	92704

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=62362](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=62362)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 62362  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: DUNG  
 Facility Representative Last Name: NGUYEN  
 Location Area Code: 714  
 Location Phone Number: 5313066  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W 1ST ST #C  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92704  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 5313066  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: DUNG  
 Mailing Representative Last Name: NGUYEN

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO ONE AUTO BODY SHOP, INC.			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	135879-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST			SANTA ANA	92703



## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=135879](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=135879)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 135879  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 5  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: MANUEL  
 Facility Representative Last Name: DUARTE  
 Location Area Code: 714  
 Location Phone Number: 5310394  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 5310394  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: MANUEL  
 Mailing Representative Last Name: DUARTE

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PHU'S AUTO BODY & REPAIRING			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	143881-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST # C			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=143881](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=143881)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transportation Plan Information click on different tabs.  
 Facility Id: 143881  
 County Code: OR  
 County: Orange  
 Facility Status Code: A  
 Facility Status: ACTIVE  
 Number of Employees: 4  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: JOHNNY  
 Facility Representative Last Name: LEE  
 Location Area Code: 714  
 Location Phone Number: 8392908  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST # C  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 8392908  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: JOHNNY  
 Mailing Representative Last Name: LEE

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO, ONE AUTO BODY & DETAIL			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	113014-SC
ADDRESS			CITY	ZIP
4609 W FIRST ST			SANTA ANA	92703

## DETAILS

District: South Coast AQMD  
 Compliance URL:  
[http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac\\_id=113014](http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=113014)  
 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.  
 Facility Id: 113014  
 County Code: OR  
 County: Orange  
 Facility Status Code: I  
 Facility Status: INACTIVE  
 Number of Employees: 0  
 Location Zip Code Extension: Not Reported  
 Facility Representative First Name: AGUSTIN  
 Facility Representative Last Name: RUELAS  
 Location Area Code: 714  
 Location Phone Number: 5310394  
 Location Phone Extension: Not Reported  
 Mailing Address: 4609 W FIRST ST  
 Mailing City: SANTA ANA  
 Mailing State: CA  
 Mailing Zip Code: 92703  
 Mailing Zip Code Extension: Not Reported  
 Mailing Area Code: 714  
 Mailing Phone Number: 5310394  
 Mailing Phone Extension: Not Reported  
 Mailing Representative First Name: AGUSTIN  
 Mailing Representative Last Name: RUELAS

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
CN AUTO BODY AND REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10538893
ADDRESS			CITY	ZIP
4609 W 1ST ST STE B			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10538893  
 Facility ID: FA0026815  
 Facility Regulator Key ID: FA0026815  
 Organization Code: 90478114  
 Business/Organization Name: CN AUTO BODY AND REPAIR  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PHUS AUTO BODY & REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10549042
ADDRESS			CITY	ZIP
4609 W 1ST ST STE C			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10549042  
 Facility ID: FA0040005  
 Facility Regulator Key ID: FA0040005  
 Organization Code: 90493405  
 Business/Organization Name: PHUS AUTO BODY & REPAIR  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO 1 AUTO BODY SHOP INC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10549036
ADDRESS			CITY	ZIP
4609 W 1ST ST STE A			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10549036  
 Facility ID: FA0040004  
 Facility Regulator Key ID: FA0040004  
 Organization Code: 90493396  
 Business/Organization Name: PRO 1 AUTO BODY SHOP INC  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 0  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO 1 AUTO BODY SHOP INC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0040004-ORG
ADDRESS			CITY	ZIP
4609 W 1ST ST STE A			SANTA ANA	92703

DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0040004 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
CN AUTO BODY AND REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0026815-ORG
ADDRESS			CITY	ZIP
4609 W 1ST ST STE B			SANTA ANA	92703

DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0026815 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PHUS AUTO BODY & REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0040005-ORG
ADDRESS			CITY	ZIP
4609 W 1ST ST STE C			SANTA ANA	92703

## DETAILS

County: Orange  
 Responsible Agency: Orange County Environmental Health  
 Type of Listing: Hazardous Waste Facilities  
 Facility ID: FA0040005  
 Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
CN AUTO BODY AND REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	447456
ADDRESS			CITY	ZIP
4609 W 1ST ST STE B			SANTA ANA	92703



## DETAILS

### Site Regulated Program Information

Site ID: 447456

Site EI ID: 10538893

Agency Provided Latitude: 33.74552

Agency Provided Longitude: -117.93037

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

### Evaluation Information

Evaluation Date: 11/26/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for routine hazardous materials and business emergency plan inspection. The inspection was conducted with An Nguyen, Employee and Chau Nguyen, Owner. Observed the facility and inspected hazardous materials storage. The following materials were observed in amounts that meet or exceed the minimum volumes required for disclosure: -2x110-gallon tanks of used oil

Evaluation Division: Orange County Environmental Health

Evaluation Program: HMRRP

Evaluation Source: CERS

Evaluation Date: 11/26/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for a routine hazardous waste inspection. Consent to inspect and take any necessary photos was given by An Nguyen, Employee and Chau Nguyen, Owner. Per Mr. Nguyen, a change of ownership occurred on 5-5-16. The ownership is now under Quinn Auto Body & Repair Inc. Walked throughout the facility. Observed hazardous waste storage areas. Containers were closed. Manifests were available and reviewed. Employees are reported to be trained. Emergency plan is posted outside of office door. No hazardous waste or universal waste observed in the dumpster/enclosure area.

Evaluation Division: Orange County Environmental Health

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO 1 AUTO BODY SHOP INC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	446581
ADDRESS			CITY	ZIP
4609 W 1ST ST STE A			SANTA ANA	92703

## DETAILS

### Site Regulated Program Information

Site ID: 446581

Site EI ID: 10549036

Agency Provided Latitude: 33.74552

Agency Provided Longitude: -117.93037

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

### Evaluation Information

Evaluation Date: 11/26/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for routine hazardous materials and business emergency plan inspection. Observed the facility and inspected hazardous materials storage. The following materials were observed in amounts that meet or exceed the minimum volumes required for disclosure: - 3x55-gallon waste paint thinner - 1x30-gallon waste paint thinner

Evaluation Division: Orange County Environmental Health

Evaluation Program: HMRRP

Evaluation Source: CERS

Evaluation Date: 11/26/2018

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): On site for a routine hazardous waste inspection. Consent to inspect and take any necessary photos was given by Manuel Duarte, Owner. Walked throughout the facility. Observed hazardous waste storage areas. Employees are reported to be trained. Emergency plan is posted in the office. No hazardous waste or universal waste observed in the dumpster/enclosure area. Manifests were available and reviewed. The facility's EPA ID # CAL000291718 is currently inactive. Mr. Duarte stated that he has emailed, faxed, and mailed the application to reactivate, to the Department of Toxic and Substance Control (DTSC). Please resubmit the application to DTSC.

Evaluation Division: Orange County Environmental Health

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PRO ONE AUTO BODY SHOP, INC.			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	488196
ADDRESS			CITY	ZIP
4609 W FIRST ST			SANTA ANA	92703-5109

## DETAILS

Site Regulated Program Information  
 Site ID: 488196  
 Site EI ID: 110037991670  
 Agency Provided Latitude: 33.74509  
 Agency Provided Longitude: -117.93037

Program Description: US EPA Air Emission Inventory System (EIS)

Evaluation Information  
 : Not Reported  
 : Violation Information  
 : Not Reported  
 : Enforcement Information  
 : Not Reported  
 : Chemical Information  
 : Not Reported  
 : Coordinate Information  
 : Not Reported  
 :

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
CN AUTO BODY AND REPAIR			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000441892
ADDRESS			CITY	ZIP
4609 W FIRST ST STE #B			SANTA ANA	92703

## DETAILS

Additional details may be found online using the following link:

[http://oaspub.epa.gov/enviro/fii\\_query\\_dtl\\_disp\\_program\\_facility?pgm\\_sys\\_id\\_in=CAL000441892&pgm\\_sys\\_acrnm\\_in=RCRAINFO](http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=CAL000441892&pgm_sys_acrnm_in=RCRAINFO)

Source Type: Implementer  
 Generator Status Universe: N  
 Generator Status: Non-Generator  
 NAICS1: OFFICE SUPPLIES AND STATIONERY STORES  
 Active Site Indicator: H----  
 Owner Name: CN AUTO BODY AND REPAIR INC  
 Operator Name: CHAU NGUYEN  
 In Handler Universes: Y  
 In a Universe: Y  
 Short Term Generator: N  
 Importer Activity: N  
 Mixed Waste Generator: N  
 Transporter Activity: Y  
 Transfer Facility: N  
 Recycler Activity: N  
 Onsite Burner Exemption: N  
 Furnace Exemption: N  
 Underground Injection Activity: N  
 Receives Waste From Off-site: N  
 Universal Waste: N  
 Universal Waste Destination Facility: Y  
 Used Oil Universe: NNNNNNN  
 Federal Universal Waste: N  
 Active Site Federally Regulated TSDF: -----

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.21 miles SW	71 ft (0 ft higher than site)	<b>16</b>
SITE NAME			MAPS	ID
PHUS AUTO BODY & REPAIR INC			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	CAL000265050
ADDRESS			CITY	ZIP
4609 W 1ST ST STE C			SANTA ANA	92703

## DETAILS

Additional details may be found online using the following link:

[http://oaspub.epa.gov/enviro/fii\\_query\\_dtl\\_disp\\_program\\_facility?pgm\\_sys\\_id\\_in=CAL000265050&pgm\\_sys\\_acrnm\\_in=RCRAINFO](http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=CAL000265050&pgm_sys_acrnm_in=RCRAINFO)

Source Type: Implementer  
 Generator Status Universe: N  
 Generator Status: Non-Generator  
 NAICS1: GENERAL AUTOMOTIVE REPAIR  
 Active Site Indicator: H----  
 Owner Name: JOHNNY LE  
 Operator Name: JOLINE PHUNG  
 In Handler Universes: Y  
 In a Universe: Y  
 Short Term Generator: N  
 Importer Activity: N  
 Mixed Waste Generator: N  
 Transporter Activity: Y  
 Transfer Facility: N  
 Recycler Activity: N  
 Onsite Burner Exemption: N  
 Furnace Exemption: N  
 Underground Injection Activity: N  
 Receives Waste From Off-site: N  
 Universal Waste: N  
 Universal Waste Destination Facility: Y  
 Used Oil Universe: NNNNNNN  
 Federal Universal Waste: N  
 Active Site Federally Regulated TSDF: -----

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Spills-SSO-CA	Listed	0.22 miles N	72 ft (1 ft higher than site)	<b>17</b>
SITE NAME			MAPS	ID
Manhole ID G03-026			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	780551
ADDRESS			CITY	ZIP
702 Mountain View Street			Santa Ana	92703

## DETAILS

### Facility and Program Information

Event ID: 780551

Certificate ID: 463859

Region: 8

County: Orange

Agency: Santa Ana City

Collection SYS: Santa Ana City CS

WDID: 8SSO10602

Certificate Person Name: Cesar E. Barrera

Certificate Person Title: Principal Civil Engineer

Certificate Location: City Yard

Certificate Date: 2012.05.07 00.00.00

Spill Location Description: Spill originated from manhole ID G03-026 in front of 702 N. Mountain View St.

Spill Type: Category 3

Appear PT: Gravity sewer;Manhole

Appear PT Explanation: Not Reported

Reach Surface: No

reach Storm Drainpipe: No

Return To SSS: Not Applicable - Spill did not reach a separate storm drainpipe

Privt Latrl Spill: No

Responsible Party: Not Reported

Final Spill Dest: Street/curb and gutter

Final Spill Dest Explanation: Not Reported

Spill Volume Reached Land: 0

Spill Volume Discharge A: 0

Spill Volume Discharge B: 0

Spill Volume Discharge C: 0

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.23 miles SW	70 ft (1 ft lower than site)	<b>18</b>
SITE NAME			MAPS	ID
ALANS LAWN MOWER			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	10537999
ADDRESS			CITY	ZIP
4621 W 1ST ST			SANTA ANA	92703

## DETAILS

### General Program & Facility Information

CERS ID: 10537999  
 Facility ID: FA0026032  
 Facility Regulator Key ID: FA0026032  
 Organization Code: 90476773  
 Business/Organization Name: ALANS LAWN MOWER  
 Multiple Jurisdictional Business? (Y/N): No  
 Business Origin: EDT  
 Count of Business' CERS User Accounts: 1  
 Facility Count for Business: 1  
 Last Submittal Date (any element): Not Reported  
 Count of Submitted Elements: 0  
 Remote Facility? (Y/N): No  
 Small Quantity Generator Facility? (Y/N): No  
 Local Facility Grouping: Not Reported

### Facility Specific Information

Assessor Parcel Number (APN): Not Reported  
 Number of Employees: Not Reported  
 Property Owner Name: Not Reported  
 Property Owner Phone Number: Not Reported  
 Property Owner Mailing Address: Not Reported  
 Property Owner Mailing City: Not Reported  
 Property Owner Mailing State: Not Reported  
 Property Owner Mailing Zip Code: Not Reported  
 Property Owner Mailing Country: Not Reported

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.23 miles SW	70 ft (1 ft lower than site)	<b>18</b>
SITE NAME			MAPS	ID
ALANS LAWN MOWER			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	FA0026032-ORG
ADDRESS			CITY	ZIP
4621 W 1ST ST			SANTA ANA	92703

## DETAILS

County: Orange  
 Responsible Agency: Orange County Environmental Health  
 Type of Listing: Hazardous Waste Facilities  
 Facility ID: FA0026032  
 Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.23 miles SW	70 ft (1 ft lower than site)	<b>18</b>
SITE NAME			MAPS	ID
ALANS LAWN MOWER			<a href="#">1</a> , <a href="#">2</a> , <a href="#">4</a>	429385
ADDRESS			CITY	ZIP
4621 W 1ST ST			SANTA ANA	92703



## DETAILS

### Site Regulated Program Information

Site ID: 429385

Site EI ID: 10537999

Agency Provided Latitude: 33.745567

Agency Provided Longitude: -117.930756

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

### Evaluation Information

Evaluation Date: 12/13/2017

Violations Found? (Y/N): Yes

Evaluation General Type: Compliance Evaluation Inspection

Evaluation Type: Routine done by local agency

Evaluation Note(s): INSPECTOR COMMENTS: One 55 gallon drum of used oil and one 55 gallon drum of waste fuel were observed this date. The drum of used oil had a label which was not completely filled out. Please ensure the accumulation start date is added to labels. The drum of waste fuel was not labeled. Labels were provided, filled out and placed onto containers. Violation corrected on site.

Evaluation Division: Orange County Environmental Health

Evaluation Program: HW

Evaluation Source: CERS

Evaluation Date: 12/17/2015

Violations Found? (Y/N): No

Evaluation General Type: Other/Unknown

Evaluation Type: Other, not routine, done by local agency

Evaluation Note(s): Your HMBEP has been declined, please revise and resubmit within 30 days. For your EPA ID# please include the last three letters. For your CAS#s in the components section please include the dashes. For your maximum daily amount it should be the maximum amount of something you can have stored on site. For example, if you have three, 55 gallon drums that you keep about half full usually, your maximum daily amount would be 165 gallons, but your average daily amount would be around 80 gallons. For your Days on Site please change it to 365, unless for over one month you do not have any waste engine oil on site. For your emergency plan please completely fill out sections a. through f. For your employee training program please accurately and completely fill out. For your site map please include the location of the nearby storm drains/sewers, your hazardous material locations, adjacent businesses, evacuation staging area, and the emergency response equipment. If [Truncated]

Evaluation Division: Orange County Environmental Health

[More Details Link](#)

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	Completed - Case Closed	0.46 miles E	72 ft (1 ft higher than site)	<b>19</b>
SITE NAME			MAPS	ID
PIEPER PROPERTY			<a href="#">1</a> , <a href="#">4</a>	T0605901710
ADDRESS			CITY	ZIP
101 N HARBOR BLVD			SANTA ANA	92703

## DETAILS

### Sites Details

#### URL:

[http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0605901710](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901710)

Global ID: T0605901710

Case Type: LUST Cleanup Site

Status: Completed - Case Closed

Status Date: 9/1/1998

CUF Case: YES

Lead Agency: SANTA ANA RWQCB (REGION 8)

Case Worker: MAO

Local Agency: SANTA ANA, CITY OF

RB Case Number: 083002376T

Loc Case Number: Not Reported

File Location: Not Reported

Potential Contaminants of Concern: Gasoline

Potential Media Affected: Aquifer used for drinking water supply

Site History: Not Reported

Begin Date: 1/16/1993

How Discovered: Tank Closure

How Discovered Description: Not Reported

Stop Method: Not Reported

Stop Method Description: Not Reported

Agency Provided Latitude: 33.745514172

Agency Provided Longitude: -117.9198859

### Regulatory Activities Details

[More Details Link](#)

## RECORDS SOURCES SEARCHED

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Air-CA	Air Permits with Emissions	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	5
AIR-DIST-CA	Air Pollution Control District	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	17
AST-CA	Historical Aboveground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	None Found
AST-CRSP-CA	Aboveground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	None Found
BF-MOA-CA	Brownfield MOA Sites (aka Considered Brownfield Sites, SWRCB MOA, Brownfield Memorandum of Agreement)	State/Tribal Brownfield	<a href="#">Click Here</a>	None Found
BF-Tribal-US	Historical Tribal Brownfields	Federal Brownfield	<a href="#">Click Here</a>	None Found
BF-US	Brownfields Sites	Federal Brownfields	<a href="#">Click Here</a>	None Found
BioFuel-US	Bio Diesel Fuel	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
BZ-HazWaste-CA	Border Zone or Hazardous Waste Property	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
CAF-CA	Confined Animal Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
CDL-CA	Clandestine Drug Labs	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
CDL-US	National Clandestine Drug Lab Register	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
CERCLIS-Archived-US	CERCLIS sites that have been archived	Federal CERCLIS NFRAP	<a href="#">Click Here</a>	None Found
CERCLIS-US	Comprehensive Environmental Response, Compensation, and Liability Information System	Federal CERCLIS	<a href="#">Click Here</a>	None Found
CERS-CA	California Environmental Reporting System (CERS)	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	10
CHMIRS-CA	California Hazardous Material Incident Report System	Emergency Release Reports	<a href="#">Click Here</a>	None Found
CHWF-CA	Commercial Offsite Hazardous Waste Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
City-AST-CA	Underground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	None Found
City-CUPA-CA	Certified Unified Program Agency	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
City-Others-CA	Hazardous Material Facilities	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
City-UST-CA	City Agency Underground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	1
Cleaners-CA	Cleaners	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Coal-Ash-Dams-US	Coal Ash Contaminated Sites and Hazard Dams	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Controls-CA	California sites with Deed Restrictions or other Controls	State/Tribal Inst/Eng Controls	<a href="#">Click Here</a>	None Found
Controls-RCRA-US	RCRA Institutional and Engineering Controls Summary (aka Federal RCRA with Controls)	Federal Institutional/Engineering Controls	<a href="#">Click Here</a>	None Found
Controls-US	US CERCLA Sites with Controls (aka US IC/EC, Institutional/Engineering List Controls, Land Use Controls)	Federal Institutional/Engineering Controls	<a href="#">Click Here</a>	None Found
CorAct-Closed-CA	Corrective Action Sites	State/Tribal ASTM Other Low	<a href="#">Click Here</a>	None Found
CorAct-Open-CA	Corrective Action Sites	State/Tribal ASTM Other High	<a href="#">Click Here</a>	None Found
CorAct-Other-CA	Corrective Action Sites	State/Tribal ASTM Other Low	<a href="#">Click Here</a>	None Found
CORTESE-CA	Cortese Hazardous Waste & Substances Sites List	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
County-AST-CA	Aboveground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	None Found
County-BI-CA	Business Inventory	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
County-Hist-CA	Historic Environmental County Listings	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
County-LUST-CA	County Agency Leaking Underground Storage Tanks	State/Tribal LUST	<a href="#">Click Here</a>	None Found
County-LUST-Closed-CA	County Agency Leaking Underground Storage Tanks, Closed Cases	State/Tribal LUST	<a href="#">Click Here</a>	None Found
County-LUST-Open-CA	County Agency Leaking Underground Storage Tanks, Open Cases	State/Tribal LUST	<a href="#">Click Here</a>	None Found
County-Others-CA	Environmental Related Databases	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	8
County-SLIC-Closed-CA	County SLIC Sites	Emergency Release Reports	<a href="#">Click Here</a>	None Found
County-SLIC-Open-CA	County SLIC Sites	Emergency Release Reports	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
County-SML-CA	County Site Mitigation Unit List	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
County-SWF-CA	County Solid Waste Facilities	State/Tribal Landfill/Solid Waste	<a href="#">Click Here</a>	None Found
County-UST-CA	County Agency Underground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	1
CRSP-CA	Cal EPA Regulated Site Portal	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	11
CUPA-CA	Certified Unified Program Agency	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Dams-CA	California Dams	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Debris-US	Historical Debris Sites	Federal Solid Waste	<a href="#">Click Here</a>	None Found
Deed-CA	Deed Restrictions/Land Use Restrictions	State/Tribal Inst/Eng Controls	<a href="#">Click Here</a>	None Found
Delisted-NPL-US	Delisted NPL Sites	Federal Delisted NPL	<a href="#">Click Here</a>	None Found
DPR-CA	Pesticide Regulation Licenses	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
DryCleaners-CA	Dry Cleaner Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
EGRID-US	Emissions & Generation Resource Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
ENF-CA	Enforcement Actions Data	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	3
ENF-SMARTS-CA	Storm Water Enforcement Actions	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
ENF-Wastewater-CA	Wastewater Enforcement Actions	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
EPA-Watch-List-US	Historical EPA Watch List	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
ERNS-US	Emergency Response Notification System	Federal ERNS	<a href="#">Click Here</a>	None Found
Eval-Hist-Active-CA	EnviroStor Evaluation History Sites	State/Tribal ASTM Other	<a href="#">Click Here</a>	None Found
Eval-Hist-NFA-CA	EnviroStor Database Evaluation History NFA Sites	State/Tribal ASTM Other	<a href="#">Click Here</a>	None Found
Eval-Hist-Other-CA	EnviroStor Database Evaluation History NFA Sites	State/Tribal ASTM Other	<a href="#">Click Here</a>	1

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
FA-HW-CA	Financial Assurance, Hazardous Waste	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FA-HW-US	Financial Assurance, Hazardous Waste	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FA-SWF-CA	Financial Assurance, Solid Waste Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FEMA-UST-US	Historical FEMA Underground Storage Tanks	Federal UST	<a href="#">Click Here</a>	None Found
FRS-US	Facility Registry Index (FINDS)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FTTS-ENF-US	Historical FIFRA/TSCA Tracking System (FTTS) Enforcement Actions	Federal ASTM Other	<a href="#">Click Here</a>	None Found
FTTS-INSP-US	Historical FIFRA/TSCA Tracking System (FTTS) Inspections	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FUDS-US	Formerly Used Defense Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
FUSRAP-US	Formerly Utilized Sites Remedial Action Program Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Haulers-CA	Registered Waste Tire Haulers Listing	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
HazWaste-CA	Hazardous Waste Facilities	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Hist-AFS2-US	Historical Air Facility System for Clean Air Act stationary sources	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-AFS-US	Historical Air Facility System for Clean Air Act stationary sources	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Agriculture	Historical Ranches/Farms, Livestock/Agriculture	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-AST-CA	Historical Aboveground Storage Tanks	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Auto Dealers	Historical Auto and Truck Dealers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Auto Repair	Historical Automotive Repair	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	4
Hist-AWS-CA	Historical Annual Workplan Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-CA	Previously Listed California Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-CalFID-CA	Historical Facility Inventory Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-CALSITES-CA	Historical Calsites Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	1

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-CERCLIS-NFRAP-US	Historical CERCLIS-NFRAP	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-CERCLIS-US	Historical CERCLIS Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Chemical Manufacturing	Historical Manufacturing and Distribution of Chemicals, Gases, and/or Solids	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Chemical-Storage	Historical Chemical/Hazardous Use Storage	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-City-UST-CA	Historical Underground Storage Tanks	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Cleaners	Historical Laundry, Cleaners, and Dry Cleaning Services	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	1
Hist-Controls-CA	Historical Restricted Use Sites	State/Tribal Inst/Eng Controls	<a href="#">Click Here</a>	None Found
Hist-Convenience	Historical Convenience Store with Possible Gas	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Cort-CA	Historical Cortese list	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Hist-Deed-CA	Historical Deed Restriction Properties	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Disposal-Recycle	Historical Hazardous Disposal/Recycle and Dumps/Waste	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-DTG-CA	Depth to Groundwater	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Dumps-US	Historical Dumps Inventory of 1985	Federal Solid Waste	<a href="#">Click Here</a>	None Found
Hist-ERNS-US	Historical Emergency Response Notification System (ERNS)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-FIFRA-US	Historical Case Administration Data from National Compliance Database (Federal Insecticide, Fungicide, and Rodenticide Act)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-FINDS-US	Historical Facility Index System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Food-Processors	Historical Food Processing Manufacturers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Gun-Ranges	Historical Gun Ranges/Clubs	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-HWS-CA	Historical Cortese List-Hazardous Waste Substance Site List	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found



ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-LUSTIS-CA	Historical Lust Information System (LUSTIS)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	2
Hist-Machine Shop	Historical Machine Shops, Welding, Machine Repair	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Manufacturing	Historical Sources US: Manufacturing	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Metal Plating	Historical Metal Plating	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Mining	Historical Mining Operations	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
HIST-MLTS-US	Historical Material Licensing Tracking System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Mortuaries	Historical Crematories/Mortuaries	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
HIST-MTBE-CA	Historical Sites With MTBE (Methyl Tertiary-Butyl Ether) Contamination	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-NPL-US	Historical National Priority List	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Oil-Gas	Historical Oil and Gas Well Related Facilities	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-OilGas-Refiners	Historical Oil/Gas Refiners/Manufacturers/Plants	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Orange-County-LF-CA	Historical Orange County Landfills	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Historical-CA	Historical Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	1
Hist-Other	Historical Environmental Facilities	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Paint-Stores	Historical Paint Stores	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Petroleum	Historical Petroleum Refining/ Manufacturing/ Chemicals	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Post-Offices	Historical Post Offices	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Printers	Historical Printers and Publishers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Prop65-CA	Historical Prop 65 Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
HIST-R4-CA	Historical sites	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found



ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-RCRIS-US	Historical EPA's Resource Conservation and Recovery Act	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-LUST-CA	Historical Leaking Underground Storage Tanks	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-Other-CA	Historical Toxic Lists, Site Mitigation, and Groundwater Cleanup Program	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-SLIC-CA	Historical Spills and Leak Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-Spills-CA	Historical Industrial Cleanup Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-SWLF-CA	Historical County Landfills and Transfer Stations	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Regional-UST-CA	Historical Underground Storage Tanks	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Rental	Historical Rental Equipment & Yards	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-RV-Dealers	Historical Trailer and Recreational Vehicle Dealers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Salvage	Historical Vehicle Salvage Yards or Wreckers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-SCL-CA	Historical California Cerclis Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Service Stations	Historical Service Stations/Vehicle Fueling	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	2
HIST-SLIC-CV-CLOSED-CA	Historical Central Valley Spills and Leak Sites	Emergency Release Reports	<a href="#">Click Here</a>	None Found
HIST-SLIC-CV-OPEN-CA	Historical Central Valley Spills and Leak Sites	Emergency Release Reports	<a href="#">Click Here</a>	None Found
Hist-Steel-Metals	Historical Steel Mills/Manufacturers/Foundries/Smelters	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-SWIS-CA	Historical Solid Waste Information System (SWIS)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Textile	Historical Textile Mills/Manufacturers	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-ToxicPits-CA	Historical Toxic Pits Cleanup Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Transportation	Historical Transportation Facilities	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-TRIS-US	Historical Toxic Release Inventory System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-Trucking	Historical Trucking, Shipping, Delivery, and/or Storage	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-US	Historical Previously Listed Federal Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-US-EC	Historical Engineering Controls Sites (aka US EC, Engineering Controls, Land Use Controls)	Federal Institutional/Engineering Controls	<a href="#">Click Here</a>	None Found
Hist-USGS-WaterWells-CA	Historical Ground Water Site Inventory for California	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-US-IC	Historical Sites with Institutional Controls (aka US IC, Institutional Controls, Land Use Controls)	Federal Institutional/Engineering Controls	<a href="#">Click Here</a>	None Found
Hist-UST-CA	Historical Hazardous Substance Storage Information (aka Historical Underground Storage Tanks)	State/Tribal UST	<a href="#">Click Here</a>	4
Hist-UST-Cleanup-CA	Historic UST Cases Recommended for Closure under UST Cleanup Fund 5 Year Review (aka UST Cleanup Fund Cases)	State/Tribal LUST	<a href="#">Click Here</a>	1
Hist-USTReg-CA	Historical Underground Storage Tank Registrations Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	3
Hist-Vehicle-Parts	Historical Vehicle Parts	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	None Found
Hist-Vehicle-Washing	Historical Vehicle/Truck Washing Facilities	ERS Exclusive Historic Sources	<a href="#">Click Here</a>	1
Hist-WaterWells-US	Historical Public Community Water Supply/Well Head Protection Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Hist-WIP-Active-CA	Historical Well Investigation Program Case List, Active Sites (aka WIP)	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Hist-WIP-Backlog-CA	Historical Well Investigation Program Case List, Backlog Sites (aka WIP)	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Hist-WIP-Historical-CA	Historical Well Investigation Program Case List, Historical Sites (aka WIP)	State/Tribal ASTM Other Low	<a href="#">Click Here</a>	None Found
Hist-WMUDS-CA	Historical Waste Management Unit Database System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
HMIS-US	Hazardous Materials Information System	Federal Emergency Release Reports	<a href="#">Click Here</a>	None Found
HWIS-CA	Hazardous Waste Information Summary	State/Tribal RCRA Equivalent	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
HWMP-Controls-CA	Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction	State/Tribal Inst/Eng Controls	<a href="#">Click Here</a>	None Found
HWT-CA	Hazardous Waste Transporters	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	1
ICE-CA	Inspection, Compliance, and Enforcement	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
ICIS-Air-US	Integrated Compliance Information System for Air	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
ICIS-FEC-US	Integrated Compliance Information System for Federal Enforcement Data	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
ICIS-NPDES-US	National Pollutant Discharge Elimination System (NPDES)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
LA-LF-CA	Los Angeles County Landfills	State/Tribal Solid Waste	<a href="#">Click Here</a>	None Found
Land-Disposal-CA	Geotracker - Land Disposal Sites (aka Landfills, LDS)	State/Tribal Landfill/Solid Waste	<a href="#">Click Here</a>	None Found
LA-Waste-Haulers-CA	Waste Haulers	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Lead-Smelter-2-US	Historical Lead Smelter Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Lead-US	Lead Smelter Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Liens-CA	Environmental Liens	State/Tribal Inst/Eng Controls	<a href="#">Click Here</a>	None Found
LIENS-US	Superfund Liens	Federal Institutional/Engineering Controls	<a href="#">Click Here</a>	None Found
LMOP-US	Landfill Methane Outreach Program	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
LUST-Closed-CA	Geotracker - Leaking Underground Storage Tanks, Closed Cases	State/Tribal LUST	<a href="#">Click Here</a>	4
LUST-Open-CA	Geotracker - Leaking Underground Storage Tanks, Open Cases	State/Tribal LUST	<a href="#">Click Here</a>	None Found
Manifest2-RI	Hazardous Waste Manifest	State/Tribal RCRA Equivalent	<a href="#">Click Here</a>	None Found
MethaneLF-CA	Methane Producing Landfills	State/Tribal Other	<a href="#">Click Here</a>	None Found
Military-Active-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
Military-Bases-US	Military Base Boundaries	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Military-NFA-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
Military-Other-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
Mines2-CA	California Mines	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Mines-CA	Historical Death Valley Mines	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Mines-CDMG-CA	California Division of Mines and Geology	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
MINES-US	Mines Master Index File	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
MLTS-US	Material Licensing Tracking System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Mortgage-CA	Cal Mortgage Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
MRDS-US	Mineral Resources Data System (MRDS)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
MWMP-CA	Medical Waste Management Program	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
NCI-CA	Non-Case Information	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
NEI-LF-CA	Historical NEI (National Emission Inventory) Landfill Point Sources	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
NPDES-CA	National Pollutant Discharge Elimination System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
NPDES-SW-CA	Notice of Intent Data	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
NPL-R9-US	NPL Region 9 Site Boundaries	Federal NPL	<a href="#">Click Here</a>	None Found
NPL-US	National Priorities List	Federal NPL	<a href="#">Click Here</a>	None Found
OGM-CA	Oil and Gas Monitoring	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
OGW-CA	California Oil and Gas Wells	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
OSCF-CA	Orphan Site Cleanup Fund	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
PADS-US	PCB Registration Database System	Federal ASTM Other	<a href="#">Click Here</a>	None Found
PCB-US	PCB Transformers	Federal ASTM Other	<a href="#">Click Here</a>	None Found
PCS-US	Historical Permit Compliance System for Clean Water Act	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Perch1-CA	Perchlorate Confirmed Contaminant Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Perch2-CA	Perchlorate Confirmed Contaminant Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
PR-MOA-CA	Polanco Redevelopment MOA Sites	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
Project-CA	Project - Multipurpose Site Type	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Proposed-NPL-US	Proposed NPL Sites	Federal NPL	<a href="#">Click Here</a>	None Found
RADINFO-US	Radiation Information Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
RCRA-CESQG-US	Resource Conservation and Recovery Act, Conditionally Exempt Small Quantity Generators (aka RCRA CESQG)	Federal RCRA Generators	<a href="#">Click Here</a>	None Found
RCRA-COR-US	Resource Conservation and Recovery Act, - Corrective Actions (aka RCRA CORRACTS)	Federal RCRA CORRACTS	<a href="#">Click Here</a>	None Found
RCRA-LQG-US	Resource Conservation and Recovery Act, Large Quantity Generators (aka RCRA LQG)	Federal RCRA Generators	<a href="#">Click Here</a>	None Found
RCRA-NON-US	Resource Conservation and Recovery Act, Non-Hazardous Generators (aka RCRA Non-Haz, RCRA NonGen, RCRA No longer Regulated)	Federal RCRA Generators	<a href="#">Click Here</a>	6
RCRA-SQG-US	Resource Conservation and Recovery Act, Small Quantity Generators (aka RCRA SQG)	Federal RCRA Generators	<a href="#">Click Here</a>	1
RCRA-TSDF-US	Resource Conservation and Recovery Act -, Treatment, Storage, and Disposal Facilities (aka RCRA TSD, RCRA TSDF)	Federal RCRA non-CORRACTS TSD	<a href="#">Click Here</a>	None Found
Response-CA	State Response Sites and National Priorities List (NPL)	State/Tribal NPL	<a href="#">Click Here</a>	None Found
RFG-Lab-US	Reformulated Gasoline (RFG)	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
RMP-US	Risk Management Plans	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
ROD-US	Records of Decision	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
SAA-Agreements-US	Sites with Superfund Alternative Approach Agreements	Federal ASTM Other	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
School-Active-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
School-NFA-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
School-Other-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
SDWIS-US	Safe Drinking Water Information System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	1
SGV-Deep-Plumes-CA	San Gabriel Valley Deep Plumes	State/Tribal Solid Waste	<a href="#">Click Here</a>	None Found
SGV-Shallow-Plumes-CA	San Gabriel Valley Shallow Plumes	State/Tribal Solid Waste	<a href="#">Click Here</a>	None Found
SGV-Shallow-Plumes-Puente-Valley-CA	Puente Valley Shallow Plumes	State/Tribal Solid Waste	<a href="#">Click Here</a>	None Found
SLIC-Closed-CA	Geotracker - The Spills, Leaks, Investigation & Cleanup (SLIC), Closed Cases	Emergency Release Reports	<a href="#">Click Here</a>	None Found
SLIC-Open-CA	Geotracker -Spills, Leaks, Investigation & Cleanup (SLIC), Open Cases	Emergency Release Reports	<a href="#">Click Here</a>	None Found
SML-CA	Site Mitigation List	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
SP-CA	Sampling Points	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Spills-SSO-CA	Sanitary Sewer System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	1
SSTS-US	Section 7 Tracking System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
State-Response-Active-CA	EnviroStor State Response Active Sites	State/Tribal NPL	<a href="#">Click Here</a>	None Found
State-Response-NFA-CA	EnviroStor State Response NFA Sites	State/Tribal NPL	<a href="#">Click Here</a>	None Found
State-Response-Other-CA	EnviroStor State Response Other Sites	State/Tribal NPL	<a href="#">Click Here</a>	None Found



ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Superfund-Active-CA	Envirostor Superfund Active Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	<a href="#">Click Here</a>	None Found
Superfund-NFA-CA	EnviroStor Superfund NFA Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	<a href="#">Click Here</a>	None Found
Superfund-Other-CA	EnviroStor Superfund Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	<a href="#">Click Here</a>	None Found
SWIS-CA	Solid Waste Information System	State/Tribal Landfill/Solid Waste	<a href="#">Click Here</a>	None Found
SWLF-US	Solid Waste Facilities	Federal Solid Waste	<a href="#">Click Here</a>	None Found
SWRCY-CA	Beverage Container Recycler Database	State/Tribal ASTM Other Med	<a href="#">Click Here</a>	None Found
TierPer-CA	Tiered Permits	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
TOMS-CA	Topographically Occurring Mine Symbols	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Tribal-Air-US	Tribal Air Permitted Facilities	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
Tribal-LUST-Closed-Reg9	Tribal Leaking Underground Storage Tanks, Region 9 (aka Indian Lust)	Federal LUST	<a href="#">Click Here</a>	None Found
Tribal-LUST-Open-Reg9	Tribal Leaking Underground Storage Tanks , Region 9 (aka Indian Lust)	Federal LUST	<a href="#">Click Here</a>	None Found
Tribal-ODI-US	Tribal Open Dump Sites	Federal Solid Waste	<a href="#">Click Here</a>	None Found
Tribal-UST-Reg9	Tribal Underground Storage Tanks (aka Tribal UST)	Federal UST	<a href="#">Click Here</a>	None Found
Tribal-VCP-US	Tribal VCP	Federal Tribal VCP	<a href="#">Click Here</a>	None Found
TRIS2000-US	Historical Toxics Release Inventory System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
TRIS2010-US	Toxics Release Inventory System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
TRIS80-US	Historical Toxics Release Inventory System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
TRIS90-US	Historical Toxics Release Inventory System	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
TSCA-US	Toxics Substance Control Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
UIC2-CA	Injection Wells	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
UIC-CA	Underground Injection Control Wells	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found

ABREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
UMTRA-US	Historical Uranium Mill Tailings Remedial Action Sites	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
USGS-Waterwells-US	Ground Water Site Inventory	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
UST-Abandoned-CA	Abandoned UST Initiative (aka Inventory of Abandoned Tank Sites)	State/Tribal UST	<a href="#">Click Here</a>	None Found
UST-CA	Geotracker - Underground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	1
UST-Closed-CA	UST Case Closure Review Denials and Approved Orders (aka Closure of Underground Storage Tank (UST) Cases)	State/Tribal UST	<a href="#">Click Here</a>	1
USTComp-CA	Previously Abandoned Tanks Now in Compliance (aka Compliance UST)	State/Tribal UST	<a href="#">Click Here</a>	None Found
UST-CRSP-CA	Underground Storage Tanks	State/Tribal UST	<a href="#">Click Here</a>	1
UST-Priority-CA	UST Cleanup Fund Priority List	State/Tribal UST	<a href="#">Click Here</a>	None Found
UST-Proposed-CA	Proposed Closure of UST Cases (aka UST Proposed for Closure)	State/Tribal UST	<a href="#">Click Here</a>	None Found
Vapor-Intrusions-US	Vapor Intrusion Database	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found
VCP-Active-CA	EnviroStor VCP Active Sites	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
VCP-NFA-CA	EnviroStor Database VCP NFA Listing	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
VCP-Other-CA	EnviroStor VCP Other Sites	State/Tribal Voluntary Cleanup Sites	<a href="#">Click Here</a>	None Found
WDR-CA	Waste Discharge Requirements	ERS Supplemental Govt Sources	<a href="#">Click Here</a>	None Found



## UN-MAPPABLE OCCURRENCES

The following occurrences were not mapped primarily due to incomplete or inaccurate address information. All of the following occurrences were determined to share the same zip code as the area searched. General status information is given with each occurrence along with any address information entered by the agency responsible for the list.

ID	Facility Name	Address	Database	Status
No "un-mapped" sites requested.				

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## Appendix E:

# Water Quality Management Plan

# PRELIMINARY WATER QUALITY MANAGEMENT PLAN (PWQMP)

FOR

Project Site:

**Tract 19064**

305 N. Mountain View Street  
Santa Ana, California

Prepared For:

**Mountain View R&E Invs, LLC**

8821 Seaspray Drive  
Huntington Beach, CA 92646

Date Prepared:

October 31, 2019 – 1<sup>st</sup> Submittal

Prepared By:



12371 Lewis Street, Suite 203  
Garden Grove, CA 92840  
714.740.8840



# **PRELIMINARY WATER QUALITY MANAGEMENT PLAN (WQMP)**

**Project Name:**

**TRACT 19064  
305 N. Mountain View Street  
Santa Ana, CA  
APN 100-281-05**

Prepared for:

Linh Bui  
Mountain View R&E Invs, LLC  
8821 Seaspray Drive  
Huntington Beach, CA 92646

Prepared by:

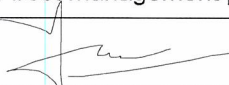
DMS Consultants, Inc.  
Engineer: Surender Dewan, P.E. Registration No.: 34559  
12371 Lewis Street, Suite 203  
Garden Grove, CA 92840  
(714) 740-8840

Date Prepared: October 31, 2019  
Date Revised:

PROJECT OWNER'S CERTIFICATION			
Permit/Application No.	TBD	Grading Permit No.	TBD
Tract No.	19064	Building Permit No.	TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)			APN 100-281-05

This Preliminary Water Quality Management Plan (PWQMP) has been prepared for LINH BUI, MOUNTAIN VIEW R&E INVS, LLC by DMS CONSULTANTS, INC. The WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

OWNER:			
Name/Title	Linh Bui		
Company	Mountain View R&E Invs, LLC		
Address	8821 Seaspray Drive Huntington Beach, CA 92646		
Email	<a href="mailto:Shaneen@olympiacorp.net">Shaneen@olympiacorp.net</a>		
Telephone #	714-318-7838		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Signature		Date	10-11-19

PREPARER (ENGINEER):			
Title	President	PE Registration #	34559 Exp. 9/30/21
Company	DMS Consultants, Inc.		
Address	12371 Lewis Street, Suite 203 Garden Grove, California 92840		
Email	Surender@DMSConsultantsInc.com		
Telephone #	714-740-8840		
I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board.			
Preparer Signature		Date	
Place Stamp Here			



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## SECTION I      DISCRETIONARY PERMITS AND WATER QUALITY CONDITIONS

PROJECT INFORMATION			
Permit/Application No.	TBD	Grading or Building Permit No. (If applicable)	
Address of Project Site (or Tract Map and Lot Number if no address) and APN	305 N. Mountain View Street Santa Ana, CA APN 100-281-05		
WATER QUALITY CONDITIONS			
Water Quality Conditions of Approval or Issuance applied to this project	This is a Preliminary WQMP. Conditions of Approval will be incorporated into the Final WQMP.		
WATERSHED-BASED PLAN CONDITIONS			
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	Not applicable		

## SECTION II PROJECT DESCRIPTION

### II.1 Project Description

The proposed Tract No. 19064 project site encompasses approximately 0.75 acres in the City of Santa Ana. The project site is bounded by multi-family homes to the south and east. A vicinity map is included in Section VI.

The site is currently a single family home. The site consists of one drainage management area.

DESCRIPTION OF PROPOSED PROJECT																
Development Category (Verbatim from WQMP):	Development Category 1 - New development projects that create 10,000 square feet or more of impervious surface. This category includes commercial, industrial, residential housing subdivisions, mixed-use, and public projects on private or public property that falls under the planning and building authority or the Permittees.															
Project Area (ft²):	32,438 ft² / 0.75 acres															
Number of Dwelling Units:	8															
SIC Code:	Not applicable. Residential development.															
Narrative Project Description:	<p>The project proposes to construct eight (8) detached condominium units varying in size from 1,800 to 1,870 SF, private streets, and open spaces.</p> <p>The breakdown of the site conditions is as follows:</p> <table><tr><td>Total building coverage:</td><td>9,830 SF</td></tr><tr><td>Total parking spaces:</td><td>32</td></tr><tr><td>Garage spaces:</td><td>16</td></tr><tr><td>Guest spaces:</td><td>16</td></tr><tr><td>Total landscape coverage:</td><td>10,260 SF</td></tr><tr><td>Total area:</td><td>32,455 SF</td></tr></table> <p>The proposed landscaping consists of drought tolerant material, some of which will be native as required by the City of Santa Ana.</p>				Total building coverage:	9,830 SF	Total parking spaces:	32	Garage spaces:	16	Guest spaces:	16	Total landscape coverage:	10,260 SF	Total area:	32,455 SF
Total building coverage:	9,830 SF															
Total parking spaces:	32															
Garage spaces:	16															
Guest spaces:	16															
Total landscape coverage:	10,260 SF															
Total area:	32,455 SF															
Project Area:	Pervious Area (acres or sq ft)	Pervious Area Percentage	Impervious Area (acres or sq ft)	Impervious Area Percentage												
Pre-Project Conditions:	0.35 acres	46%	0.40 acres	54%												
Post-Project Conditions:	0.24 acres	32%	0.51 acres	68%												
Drainage Patterns/Connections:	A Geotechnical Report and Infiltration Study conducted by Strata-Tech, Inc., indicates an infiltration rate of 6.2 inches/hour which is more than the minimum permissible of 0.3 inches/hour. A copy of this report is included in Attachment E.															

**EXISTING CONDITION**

The proposed project is located along the easterly curb of Mountain View Street in the City of Santa Ana. The overall site is long with approximate elevations varying from 70 to 72 feet above mean sea level (msl). The site is surrounded by multi-family homes to the south and east.

Under existing conditions the entire site flows easterly to Mountain View Street.

**PROPOSED CONDITION**

The proposed drainage system consists of Eco-Stone permeable pavers manufactured by Uni-Group. These pavers are installed along entire length of driveway.

The pavers are laid over a 1" thick bedding course which is laid over a 18" thick open graded gravel base.

Overflow from the area drains to Mountain View Street via a parkway drain.

## II.2 POTENTIAL STORMWATER POLLUTANTS

The table below, derived from Table 2 of the Countrywide Model WQMP Technical Guidance Document (May 2011), summarizes the categories of land use or project features of concern and the general pollutant categories associated with them.

POLLUTANTS OF CONCERN		
Pollutant	E=Expected to be of concern N=Not Expected to be of concern	Additional Information and Comments
Suspended-Solid/ Sediment	E	Potential sources of sediment include existing landscaping areas and disturbed earth surfaces.
Nutrients	E	Potential sources of nutrients include fertilizers, sediment and trash/debris.
Heavy Metals	E	Potential sources include vehicles and automotive fluids as well as various construction materials.
Pathogens (Bacteria/Virus)	E	Potential sources of pathogens include pets, food wastes and landscaping/sediment areas.
Pesticides	E	Potential sources of pesticides include landscaping and household sources.
Oil and Grease	E	Potential sources of oil and grease is parked vehicles.
Toxic Organic Compounds	E	Potential sources of toxic organic compounds are biodegradable organic material.
Trash and Debris	E	Potential sources include common litter and trash.

## II.3 HYDROLOGIC CONDITIONS OF CONCERN

The purpose of this section is to identify any hydrologic conditions of concerns (HCOC) with respect to downstream flooding, erosion potential of natural channels downstream, impacts of increased flows on natural habitat, etc.

In the North Orange County permit area, HCOCs are considered to exist if any streams located downstream from the project are determined to be potentially susceptible to hydromodification impacts and either of the following conditions exists:

- Post-development runoff volume for the 2-yr, 24-hr storm exceeds the pre-development runoff volume for the 2-yr, 24-hr storm by more than 5 percent

or

- Time of concentration (Tc) of post-development runoff for the 2-yr, 24-hr storm exceeds the time of concentration of the pre-development conditions for the 2-yr, 24-hr storm by more than 5 percent.

If these conditions do not exist or streams are not potentially susceptible to hydromodification impacts, an HCOC does not exist and hydromodification does not need to be considered further. In the North Orange County permit area, downstream channels are considered not susceptible to hydromodification, and therefore do not have potential for a HCOC, if all downstream conveyance channels that will receive runoff from the project are engineered, hardened, and regularly maintained to ensure design flow capacity, and no sensitive habitat areas will be affected.

Is the proposed project potentially susceptible to hydromodification impacts?

☐ Yes

☒ No (show map)

The project is not susceptible to hydromodification impacts because all downstream receiving waters, namely the Anaheim Bay-Huntington Harbor watershed, are considered stabilized.

See map on the following page.

#### II.4 Post Development Drainage Characteristics

The proposed drainage system consists of Eco-Stone permeable pavers manufactured by Uni-Group. These pavers are installed along entire length of driveway.

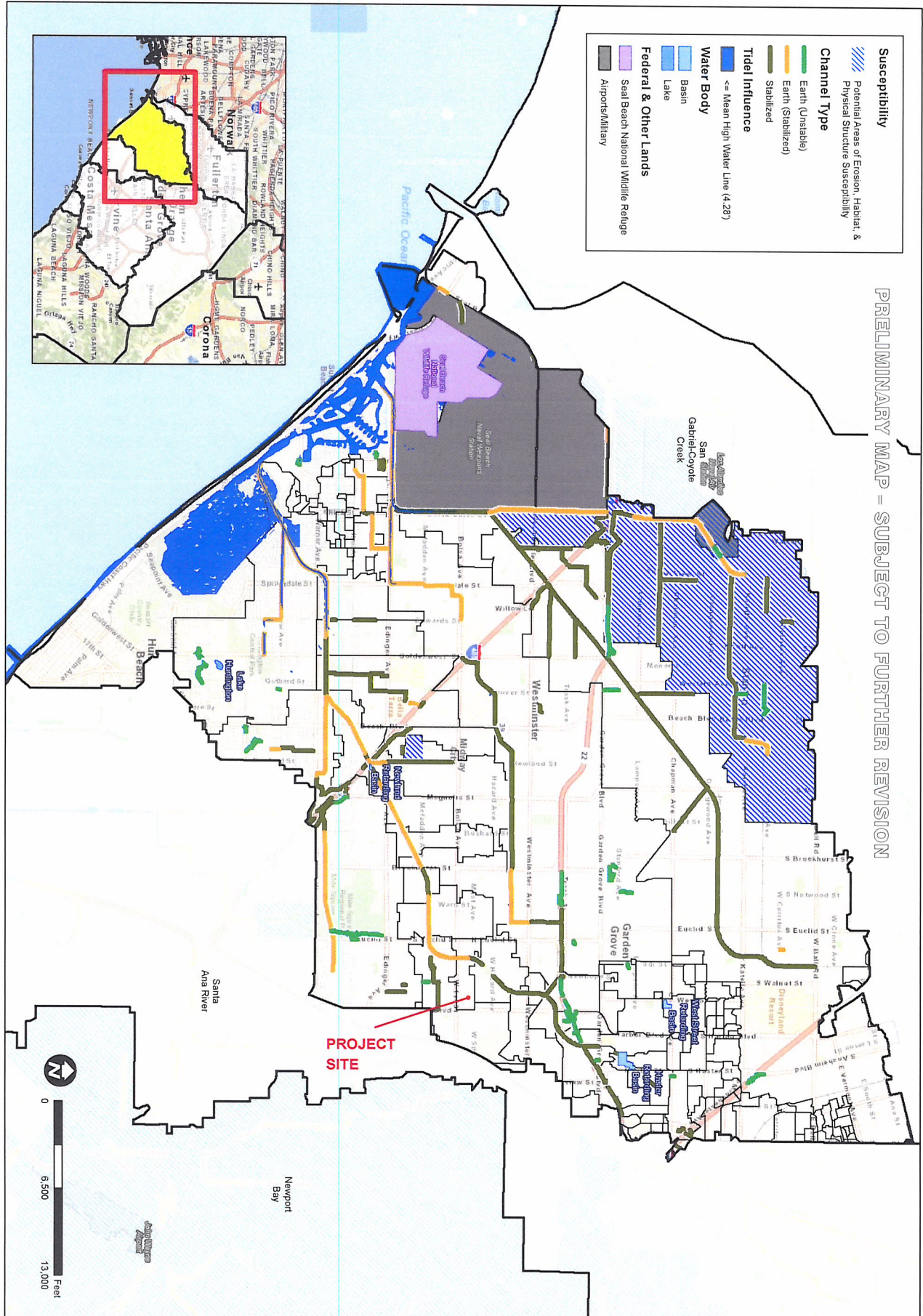
The pavers are laid over a 1" thick bedding course which is laid over an 18" thick open graded gravel base.

Overflow from the area drains to Newhope Street via a parkway drain.

#### II.5 PROPERTY OWNERSHIP/MANAGEMENT

A Home Owners Association (HOA) will be formed upon project completion. The HOA will be responsible for inspecting and maintaining all BMPs prescribed for Tract 19064. Until an HOA is formally established, Mountain View R&E Invs, LLC shall assume all BMP maintenance and inspection responsibilities for the proposed project. Inspection and maintenance activities are outlined in Section V of this WQMP.





PRELIMINARY MAP - SUBJECT TO FURTHER REVISION

SUSCEPTIBILITY MAP UPDATE (DEC 2012)

## SECTION III SITE DESCRIPTION

### III.1 PHYSICAL SETTING

Planning Area/ Community Name:	Tract 19064
Location/Address:	305 N. Mountain View Street, Santa Ana, CA
Land Use:	Multi-family residential
Zoning:	R-2 residential
Acreage:	0.75 acres
Predominant Soil Type:	Silty sand to sandy silt

### III.2 SITE CHARACTERISTICS

Precipitation Zone:	0.80 inches.
Topography:	Flat with slopes.
Drainage Patterns/Connections:	The site drains to Mountain View Street which outlets to Westminster Channel. The channel eventually outlets to Anaheim Bay-Huntington Harbor.
Soil Type, Geology, and Infiltration Properties:	According to the infiltration study constraint maps, Section XVI-2 of the T.G.D., the project is located in hydrological soil Group A. A Geotechnical Study conducted on the project site indicates the soil to be silty sand to sandy silt. An infiltration study conducted for the project indicates an infiltration rate of 6.2 inch/hour.
Hydrogeologic (Groundwater) Conditions:	The project is not located in plume protection boundary (see attached) nor is identified as natural pollution source area, contaminated site or within 250 feet of a contaminated site.
Geotechnical Conditions: (relevant to infiltration)	There are no contamination sites or groundwater protection plumes within the project vicinity. There are no concerns with the use of infiltration BMPs on-site. A geotechnical study conducted by Strata-Tech, Inc. indicates that no groundwater was encountered up to 10 feet from existing ground. (See Attachment E)
Off-Site Drainage:	The project does not receive offsite run-on from adjacent properties.
Utility and Infrastructure Information:	There are no existing subsurface utilities that will impact the location of LID BMPs on-site.

### III.3 WATERSHED DESCRIPTION

Receiving Waters:	Anaheim Bay-Huntington Harbor Watershed.
303(d) Listed Impairments:	Indicator Bacteria
Applicable TMDLs:	None
Pollutants of Concern for the Project:	Expected pollutants from residential developments include sediment, nutrients, pathogens, pesticides, oil and grease, and trash.
Environmentally Sensitive and Special Biological Significant Areas:	There are no ESAs or SBSs within the project's vicinity.



## SECTION IV BEST MANAGEMENT PRACTICES (BMPS)

### IV. 1 PROJECT PERFORMANCE CRITERIA

Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?

☐ Yes

☒ No

PROJECT PERFORMANCE CRITERIA	
Hydromodification Control Performance Criteria: (Model WQMP Section 7.II.4.2.2)	<p>For proposed projects within the North County permit area that may have an HCOC, each Priority Project proponent must determine the impact of the proposed development on the downstream hydrologic characteristics. The evaluation of potential impacts is based on the following for a two-year frequency storm event:</p> <ul style="list-style-type: none"> <li>▪ Increases in runoff volume;</li> <li>▪ Decreases in infiltration;</li> <li>▪ Changes in time of concentration;</li> <li>▪ Potential for increase in post development downstream erosion; and</li> <li>▪ Potential for adverse downstream impacts on physical structure, aquatic and riparian habitat.</li> </ul> <p>A project does not have an HCOC if either of the following conditions is met:</p> <ul style="list-style-type: none"> <li>▪ The volumes and time of concentration of stormwater runoff for the post-development conditions do not significantly exceed those of the predevelopment condition for a two-year frequency storm event (a difference of five percent or less is considered insignificant).</li> <li>▪ The site infiltrates at least the runoff from a two-year storm event.</li> </ul> <p>If a hydrologic condition of concern (HCOC) exists, priority projects shall implement onsite or regional hydromodification controls such that:</p> <ul style="list-style-type: none"> <li>▪ Post-development runoff volume for the two-year frequency storm does not exceed that of the predevelopment condition by more than five percent, and</li> <li>▪ Time of concentration of post-development runoff for the two-year storm event is not less than that for the predevelopment condition by more than five percent.</li> </ul> <p>Where the Project WQMP documents that excess runoff volume from the two-year event cannot feasibly be retained and where in-stream controls cannot be used to otherwise mitigate HCOCs, the project shall implement on-site or regional hydromodification controls</p>

	<p>to:</p> <ul style="list-style-type: none"> <li>Retain the excess volume from the two-year runoff event to the MEP, and</li> <li>Implement on-site or regional hydromodification controls such that the post-development runoff two-year peak flow is no greater than 110 percent of the pre-development runoff two-year peak flow rate.</li> </ul>
LID Performance Criteria: (Model WQMP Section 7.II-2.4.3)	Infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85 <sup>th</sup> percentile 24-hour storm event (Design Capture Volume). LID BMPs must be designed to retain, on-site, (infiltrate, harvest and use, or evapotranspire) storm water runoff up to 80 percent average annual capture efficiency.
Treatment Control BMP Performance Criteria:	If it not feasible to meet LID performance criteria through retention and/or biotreatment provided on-site or a sub-regional scale, then treatment control BMPs shall be provided on-site or offsite prior to discharge to waters of the US. Sizing of treatment control BMPs shall be based on either the unmet volume after claiming applicable water quality credits, if appropriate.
LID Design Storm Capture Volume for Project:	See BMP calculations in Attachment A.

## IV.2 SITE DESIGN AND DRAINAGE

The following section describes the site design BMPs used in this project and the methods used to incorporate them. Careful consideration of site design is a critical first step in storm water pollution prevention from new developments and redevelopments.

### Minimize Impervious Area

Impervious area will be minimized with the site's design. Surface infiltration BMPs will be incorporated as part of the project, rather than placing impervious surfaces over areas for infiltration.

### Preserve Existing Drainage Patterns

Existing drainage patterns will be preserved as indicated. The site will drain similarly to existing conditions.

### Disconnect Impervious Areas

Drainage around buildings will drain via a PVC storm drain system to permeable pavers in driveway.

### Landscape Design

Drought tolerant plants have been utilized in the project's landscape design. The landscape plan has been submitted to the City, under separate review and approval.

### Drainage Management Areas

As specified earlier in this WQMP, the project site drainage will be delineated into one Drainage Management Area (DMA).

### IV.3 LID BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

Low Impact Development (LID) BMPs are required to reduce pollutants in storm water runoff. LID BMPs are engineered facilities that are designed to retain or biotreat runoff on the project site.

#### IV.3.1 Hydrologic Source Controls

Hydrologic source controls (HSCs) can be considered to be an integration of site design practices and LID BMPs.

HYDROLOGIC SOURCE CONTROLS		
ID	Name	Included?
HSC-1	Localized on-lot infiltration	<input type="checkbox"/>
HSC-2	Impervious area dispersion (e.g. roof top disconnection)	<input type="checkbox"/>
HSC-3	Street trees (canopy interception)	<input type="checkbox"/>
HSC-4	Residential rain barrels (not actively managed)	<input type="checkbox"/>
HSC-5	Green roofs/Brown roofs	<input type="checkbox"/>
HSC-6	Blue roofs	<input type="checkbox"/>
HSC-7	Impervious area reduction (e.g. permeable pavers, site design)	<input type="checkbox"/>

Hydrologic Source Controls (HSCs) were not selected for the project.

#### IV.3.2 Infiltration BMPs

Infiltration BMPs are LID BMPs that capture, store and infiltrate storm water runoff. These BMPs are engineered to retain a specified volume of water on-site and have no discharge until the volume is exceeded. Examples of infiltration BMPs include infiltration trenches, bioretention without underdrains, drywells, permeable pavement, and underground infiltration galleries.

INFILTRATION		
ID	Name	Included?
INF-3	Bioretention without underdrains	<input type="checkbox"/>
INF-4	Rain gardens	<input type="checkbox"/>
	Porous landscaping	<input type="checkbox"/>
	Infiltration planters	<input type="checkbox"/>
	Retention swales	<input type="checkbox"/>
INF-2	Infiltration trenches	<input type="checkbox"/>
INF-1	Infiltration basins	<input type="checkbox"/>

INF-3	Drywells	<input type="checkbox"/>
INF-7	Subsurface infiltration galleries	<input type="checkbox"/>
--	French drains	<input type="checkbox"/>
INF-6	Permeable asphalt	<input type="checkbox"/>
	Permeable concrete	<input type="checkbox"/>
	Permeable concrete pavers	<input checked="" type="checkbox"/>
	Other:	<input type="checkbox"/>

All LIDs are located in common areas. Retention swales and infiltration basins were considered but not found feasible. Permeable pavers were used to accomplish infiltration.

#### IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

Evapotranspiration BMPs are a class of retention BMPs that discharges stored volume predominately to ET, though some infiltration may occur. ET includes both evaporation and transpiration, and ET BMPs may incorporate one or more of these processes. BMPs must be designed to achieve the maximum feasible ET, where required to demonstrate that the maximum amount of water has been retained on-site. Since ET is not the sole process in these BMPs, specific design and sizing criteria have not been developed for ET-based BMPs.

EVAPOTRANSPIRATION		
ID	Name	Included?
--	All HSCs; <i>See Section IV.3.1</i>	<input type="checkbox"/>
--	Surface-based infiltration BMPs	<input type="checkbox"/>
--	Biotreatment BMPs	<input type="checkbox"/>
--	Other:	<input type="checkbox"/>

HARVEST & REUSE / RAINWATER HARVESTING		
ID	Name	Included?
HU-1	Above-ground cisterns and basins	<input type="checkbox"/>
HU-2	Underground detention	<input type="checkbox"/>
--	Other:	<input type="checkbox"/>

Evapotranspiration and Rainwater Harvesting BMPs were not selected for the project since infiltration requirements have been met.

#### IV.3.4 Biotreatment BMPs

Biotreatment BMPs are a class of structural LID BMPs that treat suspended solids and dissolved pollutants in storm water using mechanisms characteristic of biologically active systems. These BMPs are considered treat and release facilities and include treatment mechanisms that employ soil microbes and plants. Additional benefits of these BMPs may include aesthetic enjoyment, recreational use, wildlife habitat and reduction in storm water volume.

BIORETREATMENT		
ID	Name	Included?
BIO-1	Bioretention with underdrains	<input type="checkbox"/>
	Stormwater planter boxes with underdrains	<input type="checkbox"/>
	Rain gardens with underdrains	<input type="checkbox"/>
BIO-5	Constructed wetlands	<input type="checkbox"/>
BIO-2	Vegetated swales	<input type="checkbox"/>
BIO-3	Vegetated filter strips	<input type="checkbox"/>
BIO-7	Proprietary vegetated biotreatment systems	<input type="checkbox"/>
BIO-4	Wet extended detention basin	<input type="checkbox"/>
BIO-6	Dry extended detention basins	<input type="checkbox"/>
	Other:	<input type="checkbox"/>

Biotreatment BMPs have not been selected for the project since infiltration requirements have been met.

#### IV.3.5 Hydromodification Control BMPs

There are no HCOCs for the project site as discussed in Section II of this WQMP.

HYDROMODIFICATION CONTROLS	
BMP Name	BMP Description
Not applicable	

#### IV.3.6 Regional/Sub-Regional LID BMPs

Not applicable to the project.

#### IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs.

TREATMENT CONTROL BMPs		
ID	Name	Included?
TRT-1	Sand filters	<input type="checkbox"/>
TRT-2	Cartridge media filter	<input type="checkbox"/>
PRE-1	Hydrodynamic separation device	<input type="checkbox"/>
PRE-2	Catch basin insert	<input checked="" type="checkbox"/>
--	Other:	<input type="checkbox"/>

FloGard inserts manufactured by Kristar were installed in drain inlets located in driveway for pretreatment.

#### IV.3.8 Non-Structural Source Control BMPs

The table below indicates all Non-Structural Source Control BMPs to be utilized in the project. For those designated as not applicable, a brief explanation why is provided.

Non-Structural Source Control BMPs				
ID	Name	Included	Not Applicable	If not applicable, state brief reason
N1	Education for Property Owners, Tenants and Occupants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N2	Activity Restrictions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N3	Common Area Landscape Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N4	BMP Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N5	Title 22 CCR Compliance (How development will comply)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous materials
N6	Local Industrial Permit Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N7	Spill Contingency Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residential development
N8	Underground Storage Tank Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed on project
N9	Hazardous Materials Disclosure Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous materials
N10	Uniform Fire Code Implementation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous materials
N11	Common Area Litter Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N12	Employee Training	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N13	Housekeeping of Loading Docks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed on project

N14	Common Area Catch Basin inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N15	Street Sweeping Private Streets and Parking Lots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N16	Retail Gasoline Outlets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed on project

**N1 - Education for Property Owners, Tenants, and Occupants**

Educational materials related to urban runoff can be provided to homeowners and employees to reduce pollutants from reaching the storm drain system.

**N2 - Activity Restrictions**

Activity restrictions can be developed to restrict activities that have the potential to create adverse impacts on water quality. Activities include but are not limited to: the handling and disposal of contaminants, trash management and litter control, irrigation and landscaping practices, vehicle and equipment cleaning, and fertilizer applications.

**N3 - Common Area Landscape Management**

Common area landscape management will include minimizing fertilizer and pesticide application, user of slow-release fertilizers, maintenance activities, and providing education and training for employees on management of landscape materials and storm water management.

**N4 - BMP Maintenance**

In accordance with City LIP and OC DAMP, the project owners and/or HOA of the site will be responsible for the implementation of all applicable non-structural BMPs, as well as scheduling inspections and maintenance of all applicable structure BMP facilities through its landscape contractor and any other necessary maintenance contractors for the project site. Responsibility shall be consistent with the BMP Inspection and Maintenance Responsibilities Matrix provided in Section V of this WQMP, with documented records of inspections and maintenance activities completed.

**N11 - Common Area Litter Control**

Regular litter control for the project shall be performed including trash pick-up on a weekly basis, and sweeping of littered common areas, as performed by the maintenance crew. In addition, pet waster receptacles will be provided throughout the project where applicable. The HOA will take note of trash disposal violations by homeowners and enforce CC&Rs appropriately.

**N12 - Employee Training**

Employees of the owner and/or HOA, as well as any contractors of the aforementioned entities will require training to ensure that employees are aware of activities that may result in pollutants reaching the storm drain. Training shall be conducted on an annual basis to ensure proper maintenance activities and daily activities are occurring.

**N14 - Common Area Catch Basin Inspection**

Includes routine maintenance of all catch basins, grate inlets, etc. for debris and litter removal. All on-site catch basins inspected and cleaned a minimum of two times annually, prior to and after the rainy season each year.



**N15 – Street Sweeping Private Streets and Parking Lots**

The project's private street shall be swept, at a minimum, prior to the start of the traditional rainy season and as needed.

**V.3.9 Structural Source Control BMPs**

The table below indicates all Structural Source Control BMPs to be utilized in the project,

<b>Structural Source Control BMPs</b>				
ID	Name	Included	Not Applicable	If not applicable, state brief reason
S1	Provide storm drain system stenciling and signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No outdoor material storage areas.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No designated common trash area proposed.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S5	Protect slopes and channels and provide energy dissipation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable. No large slopes (hillside landscaping) proposed.
S6	Dock areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S7	Maintenance bays	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S8	Vehicle wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S9	Outdoor processing areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S10	Equipment wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S11	Fueling areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S12	Hillside landscaping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S13	Wash water control for food preparation areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development
S14	Community car wash racks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None proposed. Residential development



**S1- Storm Drain Stenciling**

Storm drain stencils or signage prohibiting dumping and discharge of materials ("No Dumping – Drains to Ocean") shall be provided adjacent to the project's proposed inlets. The stencils shall be inspected and restenciled as needed to maintain legibility.

**S4 - Common Area Runoff – Minimizing Landscape Design**

Installing and maintaining efficient irrigation systems designed to minimize water by eliminating overspray to hardscape areas, and setting irrigation timing and cycle lengths in accordance with water demands, given time of year, weather, and day and night temperatures. Where feasible, includes incorporation of native tolerant species for landscaping, protection of slopes and efficient irrigation.

**IV.4 ALTERNATIVE COMPLIANCE PLAN**

**IV.4.1 Water Quality Credits**

Not applicable. No water quality credits apply since infiltration requirements have been met.

**IV.4.2 Alternative Compliance Plan Information**

Not applicable. An alternative compliance plan is not necessary since infiltration requirements have been met.

## SECTION V INSPECTION/MAINTENANCE RESPONSIBILITY FOR BMPs

It has been determined that Mountain View R&E Invs, LLC shall assume all BMP inspection and maintenance responsibilities for the Tract 19064 project, until an HOA is formally established.

Contact Name:	Linh Bui
Title:	Owner
Company:	Mountain View R&E Invs, LLC
Address:	8821 Seaspray Drive Huntington Beach, CA 92646
Telephone #:	714-318-7838
Email:	<a href="mailto:Shaneen@Olympiacorp.net">Shaneen@Olympiacorp.net</a>

The Owner/HOA shall verify BMP implementation and ongoing maintenance through inspection, self-certification, survey, or other equally effective measure. The certification shall verify that, at a minimum, the inspection and maintenance of all structural BMPs including inspection and performance of any required maintenance in the late summer/ early fall, prior to the start of the rainy season. A form that may be used to record implementation, maintenance and inspection of BMPs is included in Attachment C.

The City of Santa Ana may conduct verifications to assure that implementation and appropriate maintenance of structural and non-structural BMPs described within this WQMP is taking place at the project site. The owner shall retain operations, inspections and maintenance records of the BMPs and they will be made available to the City or County upon request. All records must be maintained for at least five (5) years after the recorded inspection date for the lifetime of the project.

Long term funding for operations and maintenance of BMPs will be generated through HOA fee. CC&Rs specifying BMP maintenance requirements of the HOA and annual HOA BMP Inspection and Maintenance budget will be finalized and submitted to the City for final review.

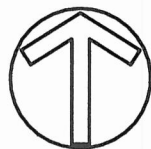
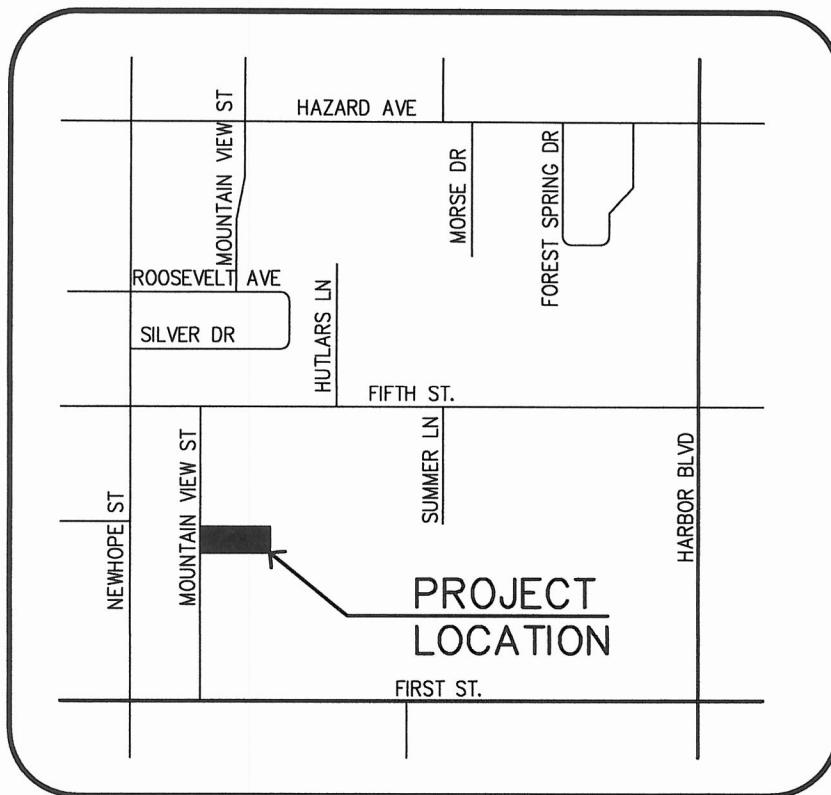
<b>BMP INSPECTION &amp; MAINTENANCE RESPONSIBILITY MATRIX</b>				
<b>BMP</b>		<b>Inspection/ Maintenance Activities Required</b>	<b>Minimum Frequency</b>	<b>Responsible Party</b>
<b>INFILTRATION BMPs</b>				
INF-6	Permeable Pavers	Inspect periodically for ponding or areas with reduced levels of infiltration. Vacuum wash the area to maintain effectiveness.	Monthly, and after every major storm	Owner / HOA
<b>Non-Structural Source Control BMPs</b>				
N1	Education for Property Owners, Tenants and Occupants	Educational materials will be provided to home owners upon occupancy. (See Attachment B)	Annually	Owner / HOA
N2	Activity Restrictions	Activity and use restrictions will be developed and enforced by the Owner/HOA through CC&Rs.	Ongoing	Owner / HOA
N3	Common Area Landscape Management	Maintenance shall be consistent with City requirements, plus fertilizer and/or pesticide usage shall be consistent with the OC DAMP. Maintenance includes mowing, weeding, and debris removal on a weekly basis. Trimming, replanting and replacement of mulch shall be performed on an as-needed basis. Trimmings, clippings, and other waste shall be properly disposed of off-site in accordance with local regulations. Materials temporary stockpiled during maintenance activities shall be placed away from water courses and drain inlets.	Monthly	Owner / HOA
N4	BMP Maintenance	Maintenance of BMPs implemented at the project site shall be performed at the frequency prescribed in this WQMP. Records of inspections and BMP maintenance shall be maintained by the Owner/HOA and documented with the WQMP, and shall be available for review upon request.	Ongoing	Owner / HOA
N11	Common Area Litter Control	Litter patrol, violations investigation, reporting and other litter control activities shall be performed in conjunction with maintenance activities. Litter collection and removal shall be performed on a weekly basis.	Weekly	Owner / HOA

<b>BMP INSPECTION &amp; MAINTENANCE RESPONSIBILITY MATRIX</b>				
<b>BMP</b>		<b>Inspection/ Maintenance Activities Required</b>	<b>Minimum Frequency</b>	<b>Responsible Party</b>
N12	Employee Training	The HOA shall educate all new employees/managers on storm water pollution prevention, particularly good housekeeping practices, prior to the start of the rainy season (October 1st).	Annually	HOA
N14	Common Area Catch Basin Inspection	Catch basin inlets, area drains, swales, curb-and-gutter systems and other drainage systems shall be inspected after each storm event and, when debris is present, cleaned prior to the storm season by October 1 <sup>st</sup> each year.	Annually	Owner / HOA
N15	Street Sweeping Private Streets and Parking Lots	Streets must be swept at minimum prior to the start of the rainy season (October 1 <sup>st</sup> ). Streets shall be swept as-needed.	Annually and as-needed	Owner / HOA
<b>STRUCTURAL SOURCE CONTROL BMPs</b>				
S1	Provide Storm Drain System Stenciling and Signage	Storm drain stencils shall be inspected for legibility, at minimum, once prior to the storm season, no later than October 1 <sup>st</sup> each year. Those determined to be illegible will re-stenciled as soon as possible.	Annually	Owner / HOA
S4	Use Efficient Irrigation Systems & Landscape Design	In conjunction with routine maintenance activities, verify that landscape design continues to function properly by adjusting properly to eliminate overspray to hardscape areas, and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, day or night time temperatures based on system specifications and local climate patterns.	Monthly	Owner / HOA

## **SECTION VI      BMP EXHIBIT (SITE PLAN)**

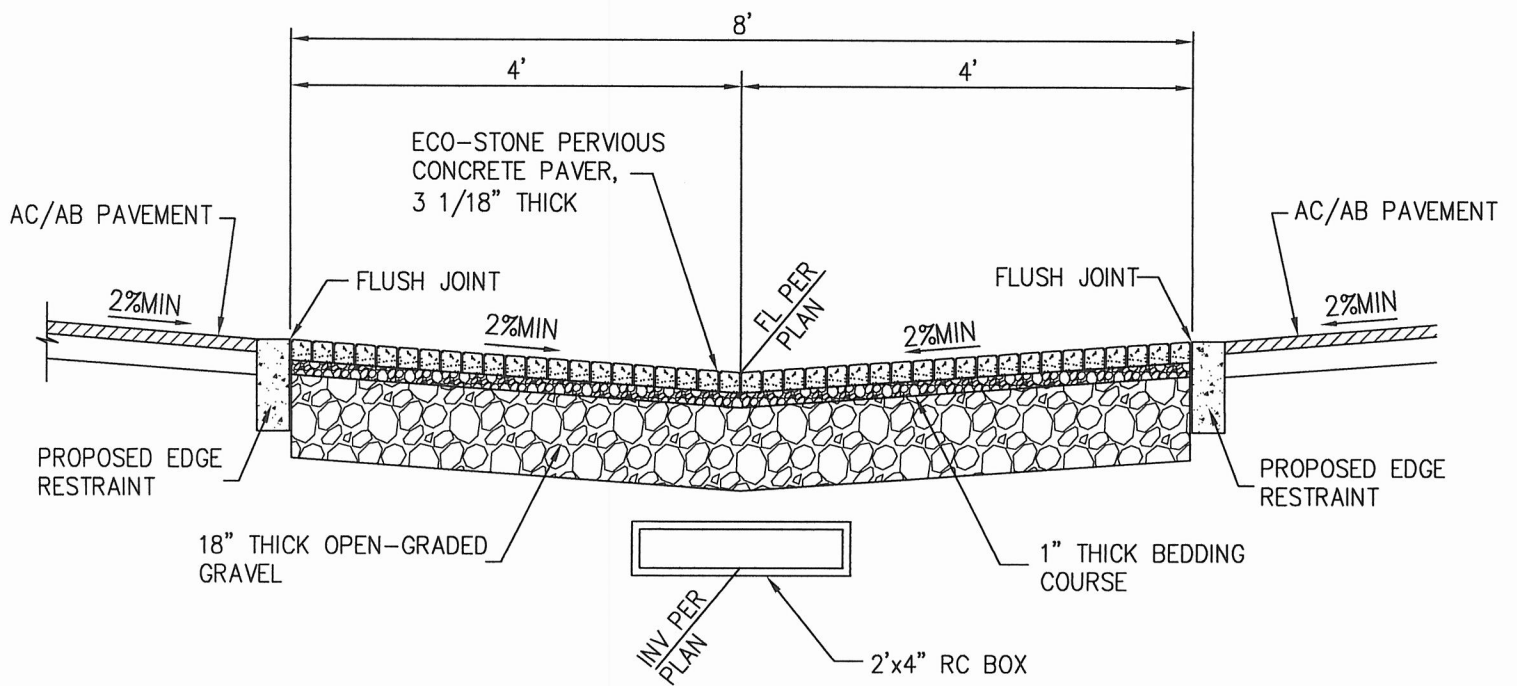
### **VI.1      BMP EXHIBIT (SITE PLAN)**

- Vicinity Map
- WQMP Exhibit
- Grading Plan



**VICINITY MAP**

NTS



## PERMEABLE ECO-STONE PAVER DETAIL

NTS

## SECTION VII EDUCATIONAL MATERIALS

The educational materials that may be used for the proposed project are included in Attachment B of this WQMP and are listed below.

EDUCATION MATERIALS			
Residential Material ( <a href="http://www.ocwatersheds.com">http://www.ocwatersheds.com</a> )	Check If Applicable	Business Material ( <a href="http://www.ocwatersheds.com">http://www.ocwatersheds.com</a> )	Check If Applicable
The Ocean Begins at Your Front Door	<input checked="" type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input type="checkbox"/>
Tips for the Home Mechanic	<input type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input type="checkbox"/>	Proper Maintenance Practices for Your Business	<input type="checkbox"/>
Household Tips	<input checked="" type="checkbox"/>	Other Material	Check If Attached
Proper Disposal of Household Hazardous Waste	<input checked="" type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (North County)	<input type="checkbox"/>	INF-6 Permeable Pavers (See Attachment C)	<input checked="" type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (Central County)	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>		<input type="checkbox"/>
Responsible Pest Control	<input type="checkbox"/>		<input type="checkbox"/>
Sewer Spill	<input type="checkbox"/>		<input type="checkbox"/>
Tips for the Home Improvement Projects	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Landscaping and Gardening	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Pool Maintenance	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Residential Pool, Landscape and Hardscape Drains	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input type="checkbox"/>		<input type="checkbox"/>



## ATTACHMENTS

Attachment A .....	TGD Worksheets and BMP Calculations
Attachment B .....	Educational Materials
Attachment C .....	Operations & Maintenance Plan
Attachment D .....	WQMP Notice of Transfer of Responsibility
Attachment E .....	Infiltration Report and Soils Report
Attachment F .....	Conditions of Approval

# **Attachment A**

## **TGD Worksheets and BMP Calculations**

Table 2.7: Infiltration BMP Feasibility Worksheet

	<b>Infeasibility Criteria</b>	<b>Yes</b>	<b>No</b>
1	<b>Would Infiltration BMPs pose significant risk for groundwater related concerns?</b> Refer to Appendix VII (Worksheet I) for guidance on groundwater-related infiltration feasibility criteria.		<b>X</b>
<p>Provide basis:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
2	<p><b>Would Infiltration BMPs pose significant risk of increasing risk of geotechnical hazards that cannot be mitigated to an acceptable level?</b> (Yes if the answer to any of the following questions is yes, as established by a geotechnical expert):</p> <ul style="list-style-type: none"> <li>• The BMP can only be located less than 50 feet away from slopes steeper than 15 percent</li> <li>• The BMP can only be located less than eight feet from building foundations or an alternative setback.</li> <li>• A study prepared by a geotechnical professional or an available watershed study substantiates that stormwater infiltration would potentially result in significantly increased risks of geotechnical hazards that cannot be mitigated to an acceptable level.</li> </ul>		<b>X</b>
<p>Provide basis:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
3	<b>Would infiltration of the DCV from drainage area violate downstream water rights?</b>		<b>X</b>
<p>Provide basis:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

	<b>Partial Infeasibility Criteria</b>	<b>Yes</b>	<b>No</b>
4	Is proposed infiltration facility <b>located on HSG D soils</b> or the site geotechnical investigation identifies presence of soil characteristics which support categorization as D soils?		<b>X</b>
<p>Provide basis:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
5	Is <b>measured infiltration rate below proposed facility less than 0.3 inches per hour</b> ? This calculation shall be based on the methods described in Appendix VII.		<b>X</b>
<p>Provide basis:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
6	Would <b>reduction of over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increased discharge of contaminated groundwater to surface waters</b> ?		<b>X</b>
<p>Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
7	Would <b>an increase in infiltration over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increased discharge of contaminated groundwater to surface waters</b> ?		<b>X</b>
<p>Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

Infiltration Screening Results (check box corresponding to result):		
8	<p>Is there substantial evidence that infiltration from the project would result in a significant increase in I&amp;I to the sanitary sewer that cannot be sufficiently mitigated? (See Appendix XVII)</p> <p>Provide narrative discussion and supporting evidence:</p> <p>Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>	<b>NO</b>
9	<p>If any answer from row 1-3 is yes: infiltration of any volume is <b>not feasible</b> within the DMA or equivalent.</p> <p>Provide basis:</p> <p>Summarize findings of infeasibility screening</p>	<b>NO</b>
10	<p>If any answer from row 4-8 is yes, infiltration is <b>permissible but is not presumed to be feasible for the entire DCV</b>. Criteria for designing biotreatment BMPs to achieve the maximum feasible infiltration and ET shall apply.</p> <p>Provide basis:</p> <p>Summarize findings of infeasibility screening</p>	<b>NO</b>
11	<p>If all answers to rows 1 through 10 are no, infiltration of the full DCV is potentially feasible, BMPs must be designed to infiltrate the full DCV to the maximum extent practicable.</p>	<b>YES</b>

## AREA "A" Permeable Pavement

Worksheet B: Simple Design Capture Volume Sizing Method

<b>Step 1: Determine the design capture storm depth used for calculating volume</b>				
1	Enter design capture storm depth from Figure III.1, $d$ (inches)	$d=$	0.80	inches
2	Enter the effect of provided HSCs, $d_{HSC}$ (inches) (Worksheet A)	$d_{HSC}=$		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}=$	0.80	inches
<b>Step 2: Calculate the DCV</b>				
1	Enter Project area tributary to BMP (s), $A$ (acres)	$A=$	0.75	acres
2	Enter Project Imperviousness, $imp$ (unitless)	$imp=$	0.68	
3	Calculate runoff coefficient, $C= (0.75 \times imp) + 0.15$	$C=$	0.66	
4	Calculate runoff volume, $V_{design}= (C \times d_{remainder} \times A \times 43560 \times (1/12))$	$V_{design}=$	1438	cu-ft
<b>Step 3: Design BMPs to ensure full retention of the DCV</b>				
<b>Step 3a: Determine design infiltration rate</b>				
1	Enter measured infiltration rate, $K_{observed}$ (in/hr) (Appendix VII)	$K_{observed}=$	6.20	In/hr
2	Enter combined safety factor from Worksheet H, $S_{total}$ (unitless)	$S_{total}=$	2	
3	Calculate design infiltration rate, $K_{design}= K_{observed} / S_{total}$	$K_{design}=$	3.10	In/hr
<b>Step 3b: Determine minimum BMP footprint</b>				
4	Enter drawdown time, $T$ (max 48 hours)	$T=$	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max}= K_{design} \times T \times (1/12)$	$D_{max}=$	12.4	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min}= V_{design} / d_{max}$	$A_{min}=$	116	sq-ft

Step 4: Determine the aggregate reservoir depth.

$$d_{48} \geq (n_R \times d_R)$$

where:

$d_{48}$  = trench effective 48-hour depth = 12.4 feet

$n_R$  = porosity of aggregate reservoir fill = 0.35

$d_R$  = depth of trench fill

$$d_R = d_{48} / n_R = 12.4 / 0.35 = 35.42 \text{ feet}$$

Use  $d_R = 1.5$  feet

Step 5: Calculate required infiltrating area.

$$A = DCV / n_R \times d_R$$

where:

$A$  = required footprint area

DCV = design capture volume

$$A = 1438 / 0.35 \times 1.50 = 2740 \text{ ft}^2$$

Area provided =

$$280 \times 10 = 2800 \text{ ft}^2$$

### Worksheet H: Factor of Safety and Design Infiltration Rate Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	1	0.25
		Depth to groundwater / impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			
B	Design	Tributary area size	0.25	1	0.25
		Level of pretreatment/ expected sediment loads	0.25		0.75
		Redundancy	0.25		0.75
		Compaction during construction	0.25		0.25
		Design Safety Factor, $S_B = \Sigma p$			
Combined Safety Factor, $S_{total} = S_A \times S_B$				2.0	
Observed Infiltration Rate, inch/hr, $K_{observed}$ (corrected for test-specific bias) <sup>1</sup>				6.2 inch/hour	
Design Infiltration Rate, in/hr, $K_{design} = K_{observed} / S_{total}$				3.10 inches/hour	

#### Supporting Data

Briefly describe infiltration test and provide reference to test forms:

See Attachment E of the WQMP.

**Note:** The minimum combined adjustment factor shall not be less than 2.0 and the maximum combined adjustment factor shall not exceed 9.0.

1 -  $K_{observed}$  is the vertical infiltration measured in the field, before applying a factor of safety. If field testing measures a rate that is different than the vertical infiltration rate (for example, three-dimensional borehole percolation rate), then this rate must be adjusted by an acceptable method (for example, Porchet method) to yield the field estimate of vertical infiltration rate,  $K_{observed}$ .

**Table VII.3: Suitability Assessment Related considerations for Infiltration Facility Safety Factors**

Consideration	High Concern	Medium Concern	Low Concern
Assessment methods (see explanation below)	Use of soil survey maps or simple texture analysis to estimate short-term infiltration rates	Direct measurement of $\geq 20$ percent of infiltration area with localized infiltration measurement methods (e.g., infiltrometer)	Direct measurement of $\geq 50$ percent of infiltration area with localized infiltration measurement methods or Use of extensive test pit infiltration measurement methods
Texture Class	Silty and clayey soils with significant fines	Loamy soils	Granular to slightly loamy soils
Site soil variability	Highly variable soils indicated from site assessment or limited soil borings collected during site assessment	Soil borings/test pits indicate moderately homogeneous soils	Multiple soil borings/test pits indicate relatively homogeneous soils
Depth to groundwater/ impervious layer	<5 ft below facility bottom	5-10 ft below facility bottom	>10 below facility bottom

Localized infiltration testing refers to methods such as the double ring infiltrometer test (ASTM D3385-88) which measure infiltration rates over an area less than 10 sq-ft, may include lateral flow, and do not attempt to account for heterogeneity of soil. The amount of area each test represents should be estimated depending on the observed heterogeneity of the soil.

Extensive infiltration testing refers to methods that include excavating a significant portion of the proposed infiltration area, filling the excavation with water, and monitoring drawdown. The excavation should be to the depth of the proposed infiltration surface and ideally be at least 50 to 100 square feet.

In all cases, testing should be conducted in the area of the proposed BMP where, based on review of available geotechnical data, soils appear least likely to support infiltration.



**Table VII.4: Design Related Considerations for Infiltration Facility Safety Factors**

Consideration	High Concern	Medium Concern	Low Concern
Tributary area size	Greater than 10 acres	Greater than 2 acres but less than 10 acres	2 acres or less
Level of pretreatment/ expected influent sediment loads	Pretreatment from gross solids removal devices only, such as Hydrodynamic separators, racks and screens AND tributary area includes landscaped areas, steep slopes, high traffic areas, or any other areas expected to produce high sediment, trash, or debris loads.	Good pretreatment with BMPs that mitigate coarse sediments such as vegetated swales AND influent sediment loads from the tributary area are expected to be relatively low (e.g., low traffic, mild slopes, disconnected impervious areas, etc.).	Excellent pretreatment with BMPs that mitigate fine sediments such as bioretention or media filtration OR sedimentation or facility only treats runoff from relatively clean surfaces, such as rooftops.
Redundancy of treatment	No redundancy in BMP treatment train	Medium redundancy, other BMPs available in treatment train to maintain at least 50% of function of facility in event of failure.	High redundancy, multiple components capable of operating independently and in parallel, maintaining at least 90% of facility functionality in event of failure.
Compaction during construction	Construction of facility on a compacted site or elevated probability of unintended/indirect compaction.	Medium probability of unintended/ indirect compaction.	Heavy equipment actively prohibited from infiltration areas during construction and low probability of unintended/ indirect compaction.



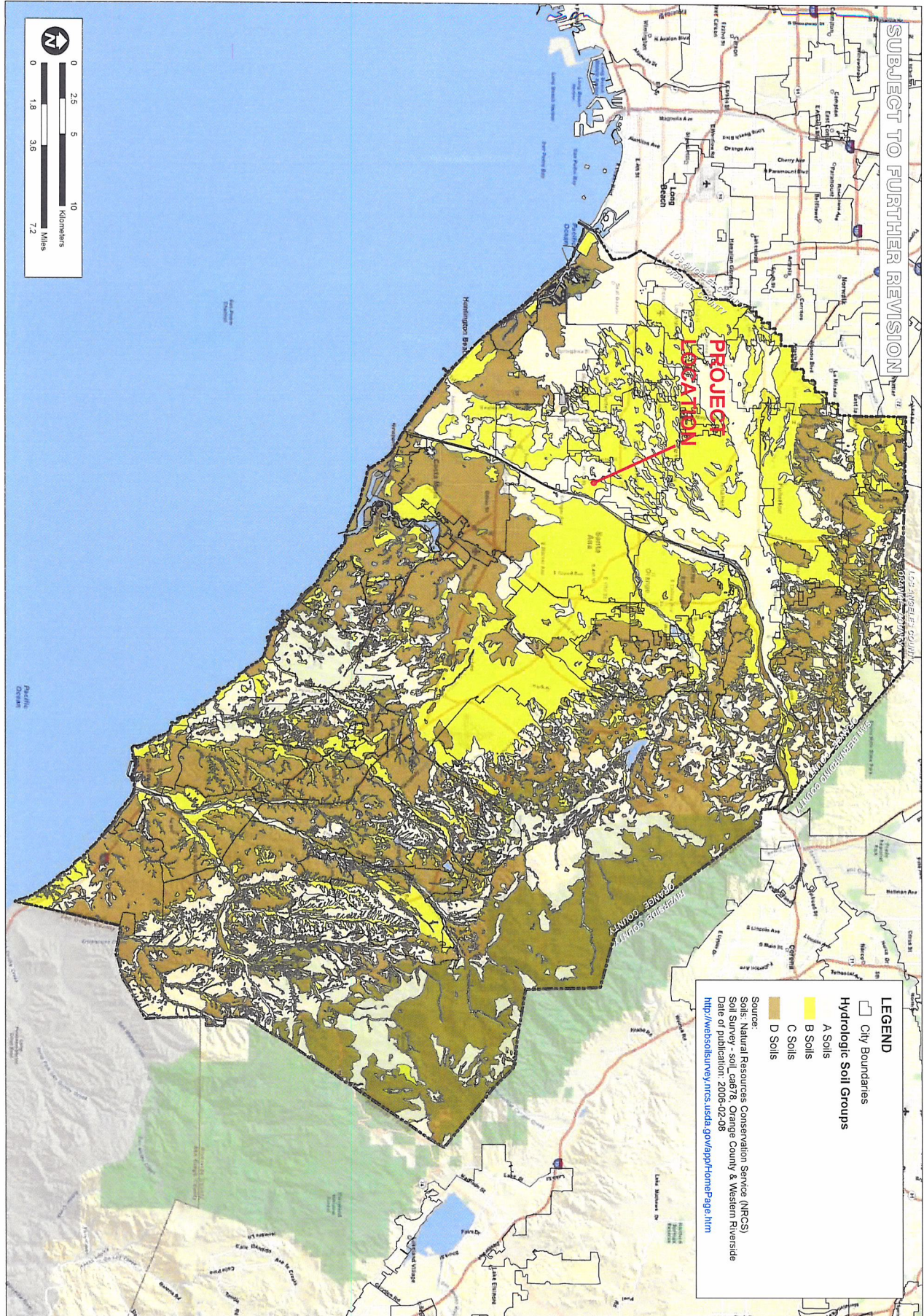


FIGURE  
XVI-2a

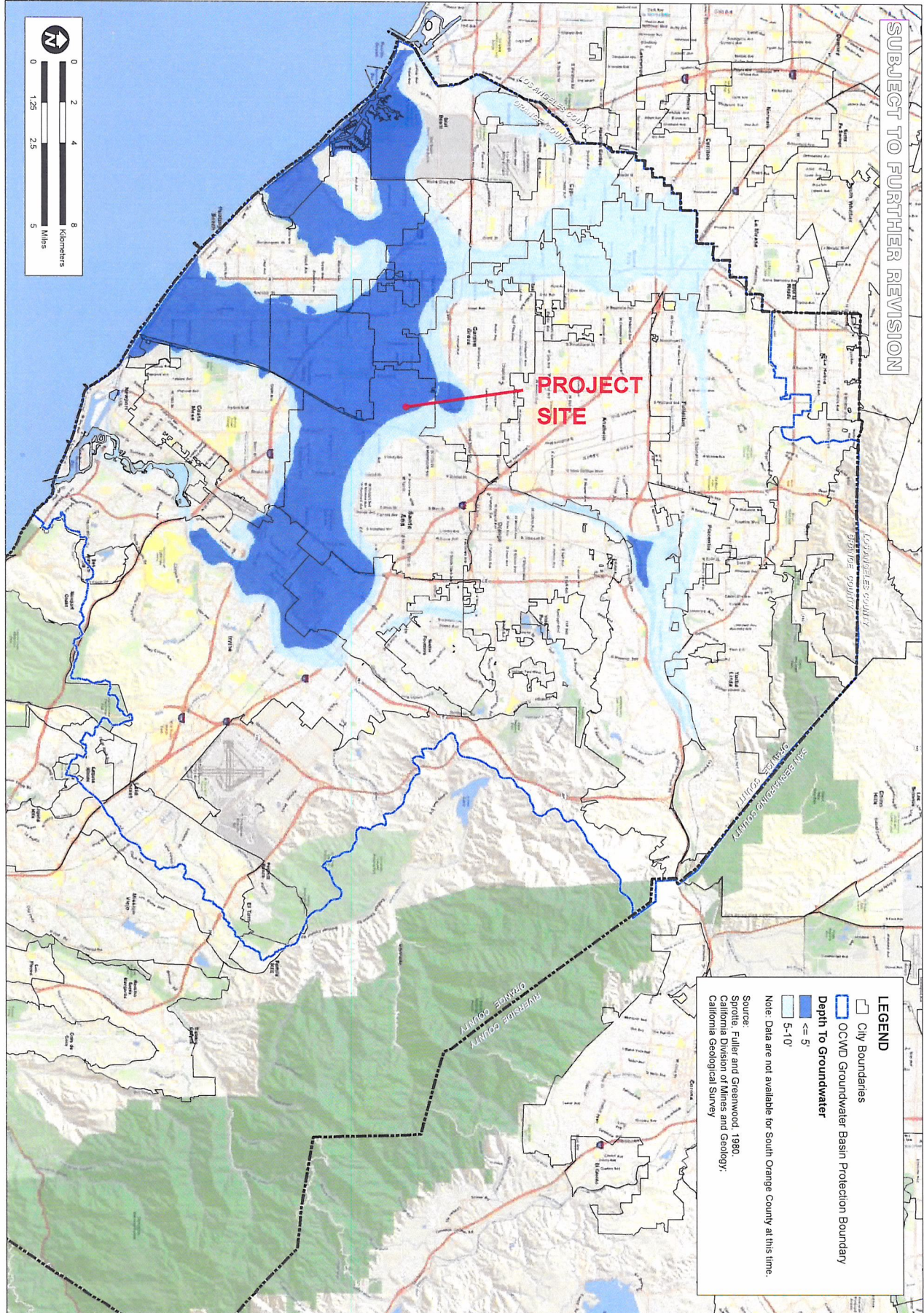


SCALE: 1" = 1.0 miles

DESIGNED	TH
DRAWING	TH
CHECKED	RMP
DATE	02/09/11
JOB NO.	9526.E

## ORANGE COUNTY INFILTRATION STUDY







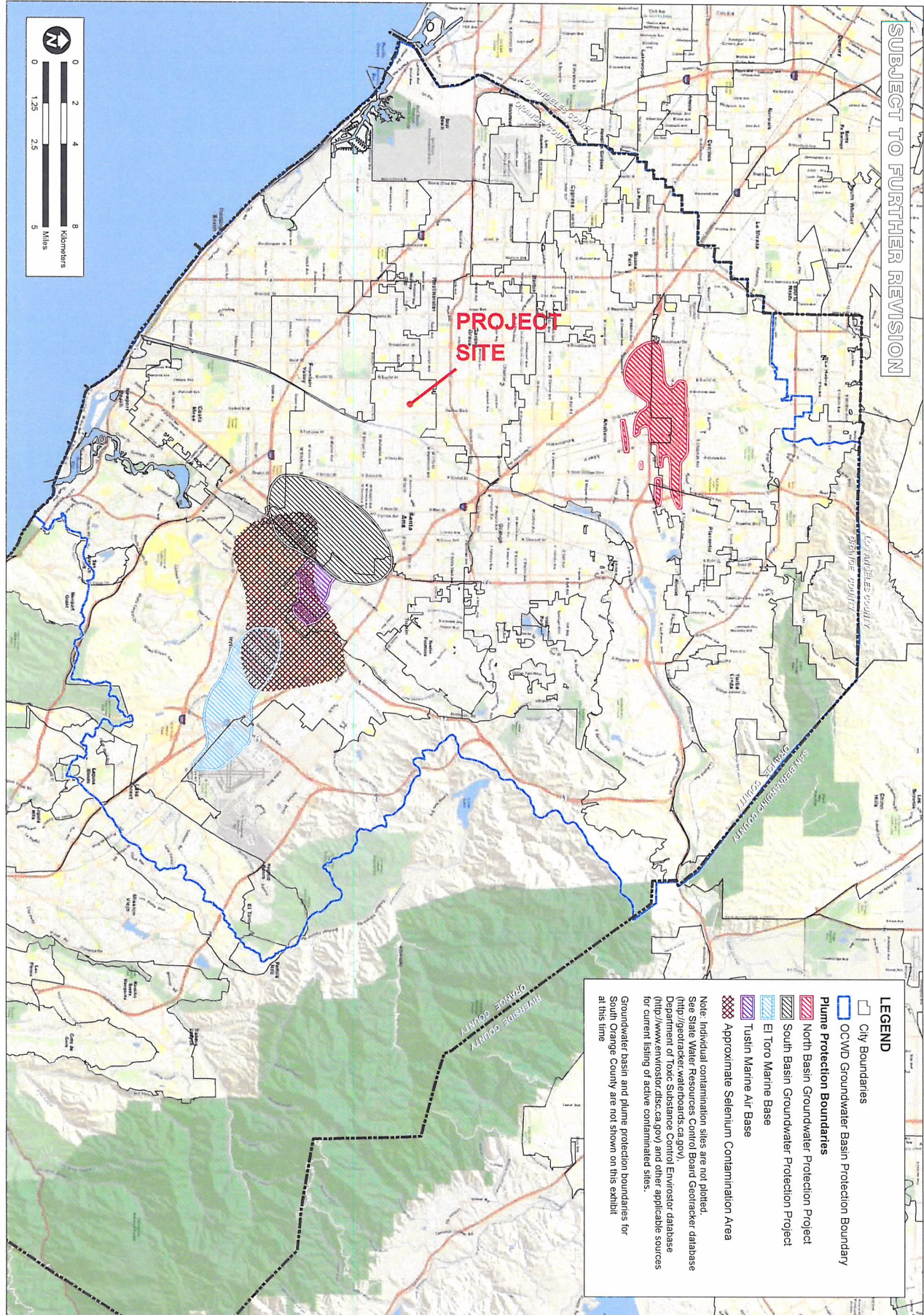


FIGURE  
XVI-2f



SCALE 1" = 1.25 miles  
DESIGNED TH  
DRAWING TH  
CHECKED BMP  
DATE 04/22/10  
JOB NO. 9526-E

JOB

# ORANGE COUNTY INFILTRATION STUDY

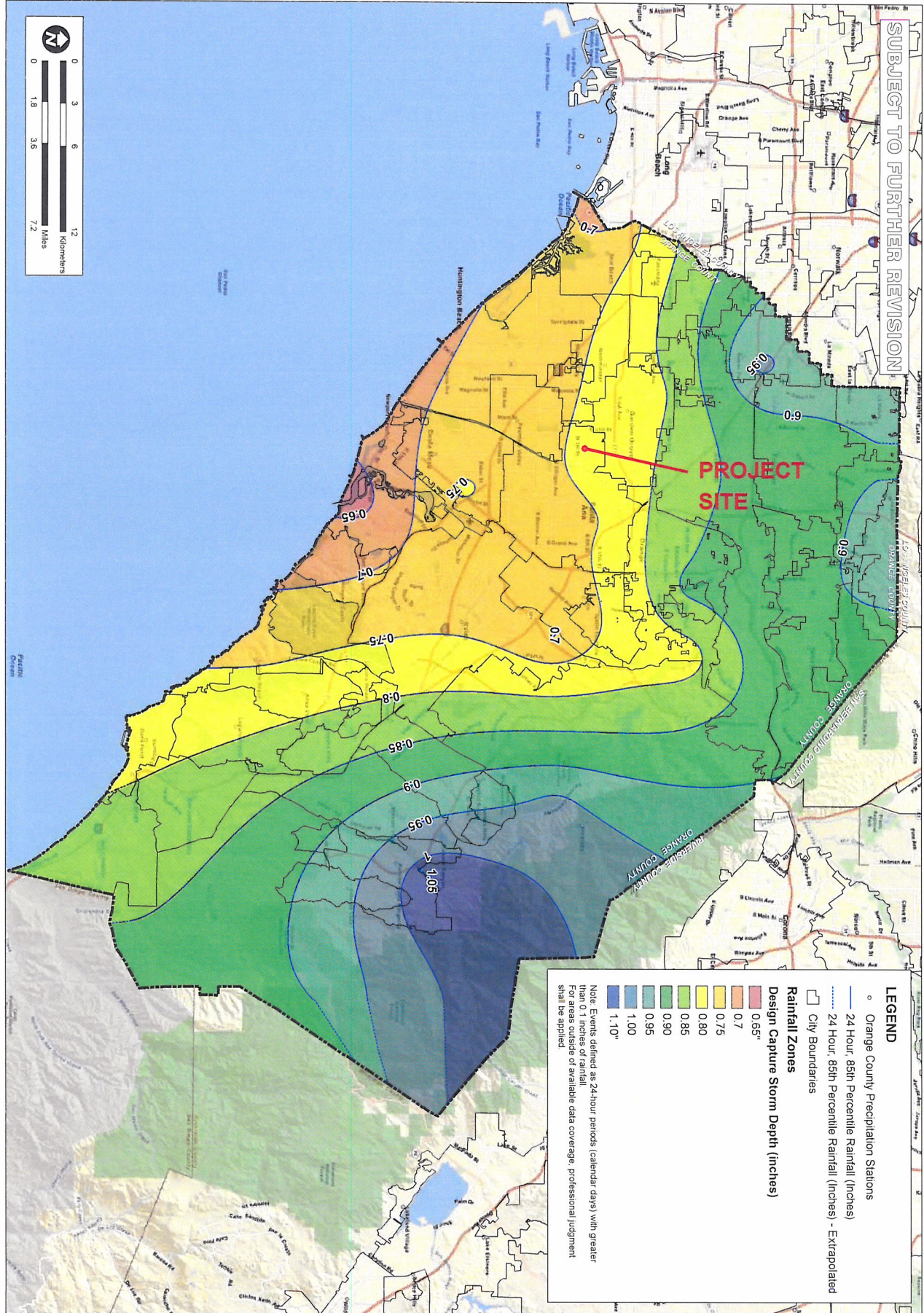
ORANGE CO.

CA

TITLE

## NORTH ORANGE COUNTY GROUNDWATER PROTECTION AREAS





XVI-1



SCALE: 1" = 1.5 miles  
DESIGNED: TH  
DRAWING: TH  
CHECKED: BMP  
DATE: 04/22/10  
JOB NO: 9526-E

ORANGE COUNTY  
TECHNICAL GUIDANCE  
DOCUMENT  
ORANGE CO.

CA

RAINFALL ZONES

## **Attachment B**

### **Educational Materials**

The Ocean Begins at Your Front Door  
Household Tips  
Proper Disposal of Household Hazardous Waste  
Recycle at Your Local Used Oil Collection Center  
Tips for Pet Care

TO BE INCLUDED IN FINAL WQMP

# **Attachment C**

## **Operation and Maintenance Plan and Supplements**

INF-6 Permeable Pavement  
Eco-Stone Permeable Pavers

**Operations and Maintenance (O&M) Plan**

**for**

**Tract No. 19064**

**305 N. Mountain View Street, Santa Ana, CA**

**APN Number 100-281-05**



Operations and Maintenance Plan  
Page 1

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Non-Structural Source Control BMPs			
Yes	<b>N1. Education for Property Owners, Tenants and Occupants</b> Education materials will be provided to homeowners at close of escrow by the developer and thereafter on an annual basis by HOA.	At close of escrow and annually thereafter	Owner/HOA
Yes	<b>N2. Activity Restrictions</b> The Owner will prescribe activity restrictions to protect surface waters quality, through a Covenant, Conditions and Restrictions (CC&R) agreement, or other equally effective measure, fir the property. Upon takeover of site responsibilities by the Homeowners Association (HOA), the HOA shall be responsible for ensuring residents compliance.	Ongoing	Owner/HOA
Yes	<b>N3. Common Area Landscape Management</b> Maintenance shall be consistent with City requirements, plus fertilizer and/or pesticide usages shall be consistent with County guidelines for use of fertilizers and pesticides. Maintenance includes mowing, weeding, and debris removal on a weekly basis. Trimming, replanting and replacement of mulch shall be performed on an as-needed basis. Trimmings, clippings, and other waste shall be properly disposed of off-site in accordance with local regulations. Materials temporarily stockpiled during maintenance shall be placed away from water courses and drain inlets.	Monthly	Owner/HOA
Yes	<b>N4. BMP Maintenance</b> Maintenance of BMPs implemented at the project site shall be performed at the frequency as per manufacturer specifications.	Ongoing	Owner/HOA
No	<b>N5. Title 22 CCR Compliance</b> Not applicable to residential projects.		
No	<b>N7. Spill Contingency Plan</b> Not applicable to residential projects.		
No	<b>N8. Underground Storage Tank Compliance</b> Not applicable. None onsite.		

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
No	<b>N9. Hazardous Materials Disclosure Compliance</b> Not applicable to residential projects.		
No	<b>N10. Uniform Fire Code Implementation</b> Not applicable to residential projects.		
Yes	<b>N11. Common Area Litter Control</b> Litter patrol, violations investigation, reporting and other litter control activities shall be performed in conjunction with landscape maintenance activities.	Ongoing patrols. Weekly (minimum) pick up and removal.	Owner/HOA
Yes	<b>N12. Employee Training</b> Train employees, contractors and subcontractors of HOA on the potential impacts of their actions on water quality. Provide training on proper material use and storage and proper clean up and disposal methods.	Annually and as needed.	Owner/HOA
No	<b>N13. Housekeeping of Loading Docks</b> Not applicable. No loading docks onsite.		
Yes	<b>N14. Common Area Catch Basin Inspection</b> Catch basin inlets, area drains, swales, curb-and-gutter systems and other drainage systems shall be inspected prior to October 1 <sup>st</sup> of each year and after large storm events. If necessary, drains shall be cleaned prior to any succeeding rain events. 80% of facilities shall be inspected and cleaned annually, with 100% of facilities inspected and maintained.	Annually	Owner/HOA
Yes	<b>N15. Street Sweeping Private Streets and Parking Lots</b> Streets must be swept at minimum, prior to the start of the rainy season (October 1 <sup>st</sup> ). Streets shall also be swept as needed.	Quarterly and as needed.	Owner/HOA
No	<b>N17. Retail Gasoline Outlets</b> Not applicable to residential projects.		

Structural Source Control BMPs				
Yes	<b>S1. Provide Storm Drain System Stenciling and Signage</b> Storm drain stencils shall be inspected for legibility, at minimum, once prior to the storm season, no later than October 1 <sup>st</sup> each year. Those determined to be illegible will be re-stenciled as soon as possible.	Annually	Owner/HOA	
No	<b>S2. Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction</b> Not applicable. No outdoor storage of hazardous materials onsite.			
No	<b>S3. Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction</b> Not applicable. None proposed.			
No	<b>S4. Use Efficient Irrigation Systems &amp; Landscape Design</b> In conjunction with routine maintenance activities, verify that landscape design continues to function properly by adjusting properly to eliminate overspray to hardscape area, and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, given time of year, weather, day or night time temperatures based on system specifications and local climate pattern.	Monthly	Owner/HOA	
No	<b>S5. Protect Slopes and Channels and Provide Energy Dissipation</b> Not applicable. Site is flat.			
No	<b>S6. Loading Docks</b> Not applicable. No loading docks onsite.			
No	<b>S7. Maintenance Bays</b> Not applicable. No maintenance bays onsite.			
No	<b>S8. Vehicle Wash Areas</b> Not applicable. No vehicle wash areas onsite.			
No	<b>S9. Outdoor Processing Areas</b> Not applicable. No outdoor processing onsite.			
No	<b>S10. Equipment Wash Areas</b> Not applicable. No equipment wash areas onsite.			

No	<b>S11. Fueling Areas</b> Not applicable. No fueling areas onsite.		
No	<b>S12. Site Design and Landscape Planning (Hillside Landscaping)</b> Not applicable. Project is not a hillside development.		
No	<b>S13. Wash Water Controls for Food Preparation Areas</b> Not applicable. No restaurant facilities onsite.		
No	<b>S14. Community Car Wash Racks</b> Not applicable. No community car wash areas onsite.		
<b>Treatment Control BMPs</b>			
Yes	<b>LID BMP # 1</b> Permeable Concrete Pavers	Twice a year inspect for ponding or areas with reduced levels of infiltration. In accordance with manufacturer's recommendations. Vacuum type street cleaning equipment should be used for removing sediment from the openings. Surface should be dry when cleaning.	Owner/HOA

### **Required Permits**

No additional permits are necessary for the operation and maintenance of the proposed BMPs.

### **Forms to Record BMP Implementation, Maintenance, and Inspection**

The form that will be used to record implementation, maintenance, and inspection of BMPs is attached.

### **Funding**

The owner is aware of the maintenance responsibilities of the proposed BMPs. All records must be maintained for at least five (5) years and must be made available for review upon request.

**RECORD OF BMP IMPLEMENTATION, MAINTENANCE, AND INSPECTION**

**Today's Date:** \_\_\_\_\_

**Name of Person Performing Activity  
(Printed):** \_\_\_\_\_

**Signature:** \_\_\_\_\_

<b>BMP Name (As Shown in O&amp;M Plan)</b>	<b>Brief Description of Implementation, Maintenance, and Inspection Activity Performed</b>

**INF-6: Permeable Pavement (concrete, asphalt, and pavers)**

Permeable pavements contain small voids that allow water to pass through to a gravel base. They come in a variety of forms; they may be a modular paving system (concrete pavers, grass-pave, or gravel-pave) or poured in place pavement (porous concrete, permeable asphalt). All permeable pavements treat stormwater and remove sediments and metals to some degree within the pavement pore space and gravel base. While conventional pavement result in increased rates and volumes of surface runoff, properly constructed and maintained porous pavements, allow stormwater to percolate through the pavement and enter the soil below. This facilitates groundwater recharge while providing the structural and functional features needed for the roadway, parking lot, or sidewalk. The paving surface, subgrade, and installation requirements of permeable pavements are more complex than those for conventional asphalt or concrete surfaces. For porous pavements to function properly over an expected life span of 15 to 20 years, they must be properly sited and carefully designed and installed, as well as periodically maintained. Failure to protect paved areas from construction-related sediment loads can result in their premature clogging and failure.

*Also known as:*

- *Pervious pavement*
- *Porous concrete*
- *Pavers*
- *Permeable asphalt*



Permeable Pavement  
Source: Geosyntec Consultants

**Feasibility Screening Considerations**

- Permeable pavement shall pass infiltration infeasibility screening to be considered for use.
- Permeable pavements pose a potential risk of groundwater contamination; they may not provide significant attenuation of stormwater pollutants if underlying soils have high permeability.

**Opportunity Criteria**

- Permeable pavement areas can be applied to individual lot driveways, walkways, parking lots, low-traffic roads, high-traffic (with low speeds) roads/lots, golf cart paths, within road right-of-ways, and in parks and along open space edges. Impervious surfaces draining to the BMP are limited to surfaces immediately adjacent to the permeable pavement, rooftop runoff, and other nearby surfaces that do not contain significant sediment loads.
- Soils are adequate for infiltration or can be amended to provide an adequate infiltration rate.
- Infiltration is into native soil, or depth of engineered fill is  $\leq 5$  feet from the bottom of the facility to native material and infiltration into fill is approved by a geotechnical professional.

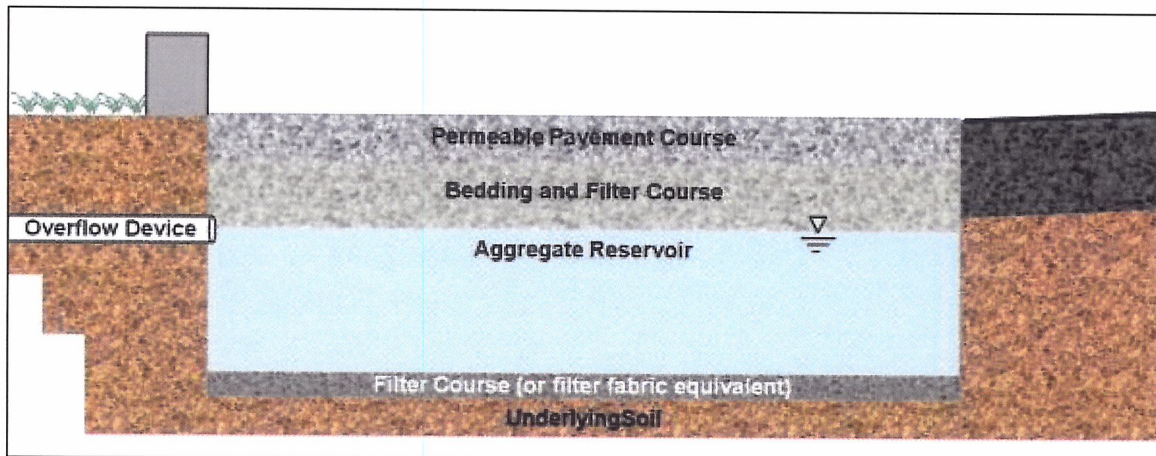
**OC-Specific Design Criteria and Considerations**

- ☐ Placement of BMPs should observe geotechnical recommendations with respect to geological hazards (e.g. landslides, liquefaction zones, erosion, etc.) and set-backs (e.g., foundations, utilities, roadways, etc)
- ☐ Minimum separation to mounded seasonally high groundwater of 5 feet shall be observed.



- ☐ A biotreatment BMP should be provided for all runoff from off-site sources that are not directly adjacent to the permeable pavement, with the exception of rooftops.
- ☐ Permeable pavement should not be used for drainage areas with high sediment production potential (e.g., landscape areas) unless preceded by full treatment control with a BMP effective for sediment removal
- ☐ All aggregate used to construct permeable pavement shall be thoroughly washed before being delivered to the construction site.
- ☐ The top or wearing layer course (permeable pavement course) should consist of asphalt or concrete with greater than normal percentage of voids, or paving stones.
- ☐ A layer of washed fine aggregate (e.g., No. 8) just under the permeable pavement course may be installed to provide a level surface for installing the permeable pavement and also acts as a filter to trap particles and help prevent the reservoir layer from clogging. This layer can also act as interstitial media between pavers.
- ☐ Below this layer, the bedding and filter course course should be 1.5 to 3 inches deep and may be underlain by choking stone to prevent the smaller sized aggregate from migrating into the large aggregate base layer.
- ☐ The bedding, filter, and choke stone layers, as applicable, are referred to collectively as the bedding and filter course.
- ☐ The aggregate reservoir layer should be designed to function as a support layer as well as a reservoir layer the reservoir layer should be washed, open-graded No. 57 aggregate without any fine sands.
- ☐ The type of pedestrian traffic should be considered when determining which type of permeable pavement to use in particular locations (e.g., pavers may not be a good option for locations where people wearing high heels will be walking).
- ☐ An overflow device is required in the form of perimeter control or overflow pipes. This should generally be set at an elevation to prevent ponding of water into the bedding and filter course.

Figure XIV.1: Schematic Diagram of Permeable Pavement without Underdrains



### ***Simple Sizing Method for Permeable Pavement***

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Permeable pavement that manages only direct rainfall and runoff from adjacent impermeable surfaces less than 50 percent the size of the permeable pavement are not required to conduct sizing calculations. These areas are assumed to be self-retaining for the purpose of drainage planning. For permeable pavement with larger tributary area ratios, sizing calculations must be performed.

If the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1** is used to size permeable pavement, the user calculates the DCV, designs the geometry required to draw down the DCV in 48 hours, then determines the area that is needed for the BMP. The area of the porous pavement itself as well as the area of the tributary areas should be considered in calculating the DCV. The sizing steps are as follows:

#### **Step 1: Determine Permeable Pavement DCV**

Calculate the DCV using the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1**.

#### **Step 2: Determine the 48-hour Effective Depth**

The depth of water that can be drawn down in 48 hours can be calculated using the following equation:

$$d_{48} = K_{\text{DESIGN}} \times 48 \text{ hours} \times 1 \text{ ft/12 inches}$$

Where:

$d_{48}$  = pavement effective 48-hour drawdown depth, ft

$K_{\text{DESIGN}}$  = basin design infiltration rate, in/hr (See **Appendix VII**)

This is the maximum effective depth of water storage in the aggregate reservoir to achieve drawdown in 48 hours.

#### **Step 3: Determine the Aggregate Reservoir Depth**

The depth of water stored in the gravel reservoir should be equal or less than  $d_{48}$ . Determine the reservoir depth such that:

$$d_{48} \geq (n_R \times d_R)$$

Where:

$d_{48}$  = trench effective 48-hour depth, ft (from Step 2)

$n_R$  = porosity of aggregate reservoir fill; 0.35 may be assumed where other information is not available

$d_R$  = depth of trench fill, ft

#### **Step 4: Calculate the Required Infiltrating Area**

The required infiltrating area can be calculated using the following equation:

$$A = \text{DCV} / (n_R \times d_R)$$

Where:

$A$  = required footprint area, sq-ft

DCV = design capture volume, cu-ft (see Step 1)

$n_R$  = porosity of trench fill; 0.35 may be assumed where other information is not available

$d_R$  = depth of trench fill, ft

This area is equal to the required pavement area.



The ratio total tributary area (including the porous pavement) to the area of the porous pavement should not exceed 4:1.

### ***Capture Efficiency Method for Permeable Pavement***

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If BMP geometry has already been defined and deviates from the 48 hour drawdown time, the designer can use the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See **Appendix III.3.2**) to determine the fraction of the DCV that must be provided to manage 80 percent of average annual runoff volume. This method accounts for drawdown time different than 48 hours.

#### ***Option 1: Pavement Geometry is Predefined***

##### **Step 1: Determine the Drawdown Time Associated with the Selected Pavement Geometry**

$$DD = ((n_R \times d_R) / K_{DESIGN}) \times 12 \text{ in/ft}$$

Where:

DD = time to completely drain pavement, hours

$n_R$  = porosity of reservoir fill; 0.35 may be assumed where other information is not available

$d_R$  = depth of reservoir, ft

$K_{DESIGN}$  = basin design infiltration rate, in/hr (See **Appendix VII**)

##### **Step 2: Determine the Required Adjusted DCV for this Drawdown Time**

Use the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See **Appendix III.3.2**) to calculate the draw-down adjusted DCV that the basin must hold to achieve 80 percent capture of average annual stormwater runoff volume based on the pavement drawdown time calculated above.

##### **Step 3: Determine the Pavement Infiltrating Area Needed**

The required infiltrating area can be calculated using the following equation:

$$A = DCV / (n_R \times d_R)$$

Where:

A = required footprint area, sq-ft

DCV = design capture volume, cu-ft (see Step 1)

$n_R$  = porosity of reservoir fill; 0.35 may be assumed where other information is not available

$d_R$  = depth of reservoir, ft

If the area required is greater than the selected pavement area, adjust reservoir depth and recalculate required area until the required area is achieved.

### ***Configuration for Use in a Treatment Train***

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- Permeable pavement may be preceded in a treatment train by HSCs in the drainage area, which would reduce the runoff volume to be infiltrated by the permeable pavement
- Permeable pavement areas can be designed to be self-retaining to lessen the pollutant and volume load on downstream BMPs.

### ***Additional References for Design Guidance***

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- SMC LID Manual (pp 84):  
[http://www.lowimpactdevelopment.org/guest75/pub/All\\_Projects/SoCal\\_LID\\_Manual/SoCalLID\\_Manual\\_FINAL\\_040910.pdf](http://www.lowimpactdevelopment.org/guest75/pub/All_Projects/SoCal_LID_Manual/SoCalLID_Manual_FINAL_040910.pdf)

- Los Angeles Unified School District (LAUSD) Stormwater Technical Manual, Chapter 5:  
[http://www.laschools.org/employee/design/fs-studies-and-reports/download/white\\_paper\\_report\\_material/Storm\\_Water\\_Technical\\_Manual\\_2009-opt-red.pdf?version\\_id=76975850](http://www.laschools.org/employee/design/fs-studies-and-reports/download/white_paper_report_material/Storm_Water_Technical_Manual_2009-opt-red.pdf?version_id=76975850)
- City of Portland Stormwater Management Manual (Pervious Pavement, page 2-40)  
<http://www.portlandonline.com/bes/index.cfm?c=47954&a=202883>  
San Diego County LID Handbook Appendix 4 (Factsheets 8, 9 & 10):  
<http://www.sdcountry.ca.gov/dplu/docs/LID-Appendices.pdf>  
City of Santa Barbara Storm Water BMP Guidance Manual, Chapter 6:  
[http://www.santabarbaraca.gov/NR/rdonlyres/91D1FA75-C185-491E-A882-49EE17789DF8/0/Manual\\_071008\\_Final.pdf](http://www.santabarbaraca.gov/NR/rdonlyres/91D1FA75-C185-491E-A882-49EE17789DF8/0/Manual_071008_Final.pdf)  
County of Los Angeles Low Impact Development Standards Manual, Chapter 5:  
[http://dpw.lacounty.gov/wmd/LA\\_County\\_LID\\_Manual.pdf](http://dpw.lacounty.gov/wmd/LA_County_LID_Manual.pdf)



# UNI ECO-STONE®

Permeable Interlocking  
Concrete Pavement



UNI-GROUP U.S.A.

Manufacturers of UNI Paving Stones



ECOLOC®



## DEVELOPMENT, IMPERVIOUS COVER AND IMPACTS OF STORMWATER RUNOFF

With ever-increasing levels of development, natural, open land is rapidly being replaced with impervious surfaces such as asphalt roadways, parking lots, and buildings. As a result, the management of increased levels of stormwater runoff and its impact on the environment has become a major issue for all levels of government throughout the country. Numerous studies indicate that stormwater runoff is the primary source of pollutants found in surface waters and contains a toxic combination of oils, pesticides, metals, nutrients, and sediments. Additionally, research has shown that once a watershed reaches just 10% impervious cover, water resources are negatively impacted.



*Stormwater Inlet Drain - Lake Park, FL*

stormwater programs involves the use of “best management practices” (BMPs) to manage and control stormwater runoff. Effective management of stormwater runoff offers a number of benefits, including improved quality of surface waters, protection of wetland and aquatic ecosystems, conservation of water resources, and flood mitigation. The EPA recommends approaches that integrate control of stormwater and protection of natural systems.

In 1999 and 2001, the International City/County Managers Association (ICMA) and EPA released the framework for “Smart Growth” policies that communities around the country could adopt to meet environmental, community, and economic goals. Simultaneously, organizations such as the Low Impact Development Center and the Center for Watershed Protection began advocating low impact development (LID) as a way to preserve and protect the nation’s water resources. They promote comprehensive land planning and engineering design, watershed planning and restoration, and stormwater management approaches that protect water resources and attempt to maintain pre-existing hydrologic site conditions. Their goal is to achieve superior environmental protection, while still allowing for development.

The EPA began working with these organizations in 2006 to promote the use of LID and Smart Growth as a way to manage stormwater runoff. The goal is to protect water resources at the regional level by encouraging states and municipalities to implement policies that consider both growth and conservation simultaneously. These approaches are quickly gaining favor across the country and are being incorporated into local development regulations to help meet stormwater runoff requirements and provide more livable, sustainable communities for residents. One of the

In the early 1990s, the United States Environmental Protection Agency (EPA) established the National Pollutant Discharge Elimination System (NPDES) stormwater regulations to comply with the requirements of the Clean Water Act. Compliance with federal, state, and local



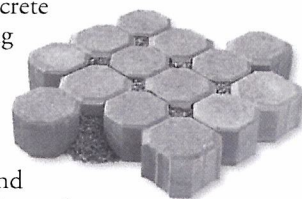
*Private Residence - Narragansett, RI*

primary goals of LID design is to reduce runoff volume by infiltrating rainwater on site and to find beneficial uses for the water as opposed to utilizing storm drains. LID objectives include the reduction of impervious cover, preservation of natural landscape features, and the maximization of infiltration opportunities. Infiltration helps recharge groundwater, reduces urban heat island effects, and reduces downstream erosion and flooding. This allows development to occur with much less environmental impact.

In addition, “green building” programs are gaining in popularity. The Leadership in Energy and Environmental Design (LEED®) green building assessment system, developed by the U.S. Green Building Council, has been adopted by a number of cities and states that now require municipal buildings to meet LEED® certification standards. Also, the National Association of Home Builders (NAHB) has released a comprehensive guide on green building that promotes mixed-use developments, cluster housing, green technologies and materials, and alternative stormwater approaches.

## UNI ECO-STONE®... THE SOLUTION TO STORMWATER RUNOFF PROBLEMS

Permeable interlocking concrete pavements (PICPs) are becoming increasingly popular as more cities and states are faced with meeting stormwater runoff regulations, increased impervious cover restrictions, and the adoption of LID or LEED® practices.



*UNI Eco-Stone®*

Eco-Stone® is a permeable interlocking concrete pavement system that mitigates stormwater runoff through infiltration. This allows for reduction of volume and peak flows, improved water quality, filtering of pollutants, mitigation of downstream flooding, and recharge of groundwater. Eco-Stone® is a true interlocking paver that offers the structural support, durability, and beauty of traditional concrete pavers, combined with the environmental benefit of permeability. The permeability is achieved through the drainage openings created by its notched design. Measurements of a typical UNI Eco-Stone® paver and physical characteristics are shown in Figure 1.



### Physical Characteristics

Height/Thickness	3 1/8"	= 80mm
Width	4 1/2"	= 115mm
Length	9"	= 230mm
Pavers per sq ft		= 3.55
Percentage of drainage void area per sq ft		= 12.18%

### Composition and Manufacture

Minimum compressive strength - 8000psi  
Maximum water absorption - 5%  
Meets or exceeds ASTM C-936  
and freeze-thaw testing per  
section 8 of ASTM C-67.

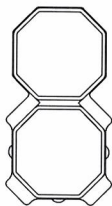


Figure 1

The drainage openings in an Eco-Stone® permeable pavement are created when the pavers are installed (Figure 2). This is what distinguishes Eco-Stone® permeable pavers from traditional interlocking concrete pavers. The drainage openings are filled with a clean, hard crushed aggregate that is highly permeable, allowing for rapid infiltration of stormwater (Figure 3).

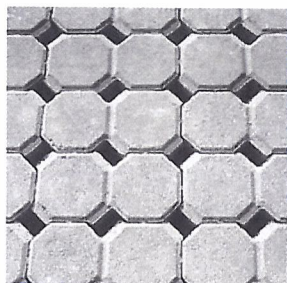


Figure 2

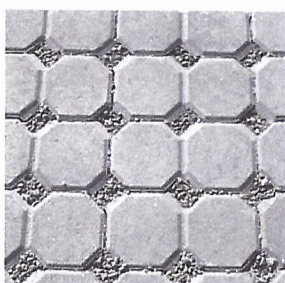


Figure 3

### ECO-STONE® PERMEABLE PAVEMENT AS AN EPA BEST MANAGEMENT PRACTICE

The EPA encourages “system building” to allow for the use of appropriate site-specific practices that will achieve the minimum measures under Phase II of NPDES. Governing authorities must develop and implement strategies that include a combination of structural and/or non-structural BMPs appropriate for their communities. Structural practices include storage practices, filtration practices, and infiltration practices that capture runoff and rely on infiltration through a porous medium for pollutant reduction. Infiltration BMPs include detention ponds, green roofs, bioswales, infiltration trenches, and permeable pavements. Non-structural practices are preventative actions that involve management and source controls. Many states and municipalities have incorporated the EPA regulations into their stormwater design and BMP manuals as they attempt to deal with stormwater runoff, increased impervious cover, and over-taxed drainage and sewer systems.

PICPs are considered structural BMPs under infiltration practices. From an engineering viewpoint, permeable pavements are infiltration trenches with paving on top that supports pedestrian and vehicular traffic. By combining

infiltration and retention, Eco-Stone® permeable interlocking concrete pavement offers numerous benefits over other types of structural systems. Permeable pavements also work well in conjunction with other recommended BMP practices such as swales, bioretention areas, and rain gardens.



Rainwater Runoff Model - Minnehaha Creek Watershed District, MN

### ECO-STONE® PERMEABLE PAVEMENT AND LID, LEED AND GREEN BUILDING

According to the Natural Resources Defense Council, LID has emerged as an attractive approach to controlling stormwater pollution and protecting watersheds. With reduction of impervious surfaces a major tenant of LID, permeable and porous pavements, such as Eco-Stone®, are listed as one of the ten most common LID practices. The use of site-scale technologies, such as PICPs that control runoff close to the source, closely mirror the natural process of rainwater falling onto undeveloped areas and infiltrating into the earth. With many areas of the country experiencing water shortages and increasing water pollution, LID and Smart Growth approaches will not only help alleviate these problems, but also create cities that are more energy efficient, environmentally sustainable, and cost effective.



McKinney Green Building, McKinney, TX - LEED® Platinum Certified





*Sherwood Island State Park - Westport, CT*

The LEED® green building assessment system has become increasingly popular with the North American design community since its inception in 1998. This voluntary building system for rating new and existing commercial, institutional, and high-rise residential buildings, evaluates environmental performance from a “whole building” perspective over the project’s life cycle. New green design standards are being considered for neighborhood design and residential homes as well. The minimum number of points or credits for a project to be LEED® certified is 26, though silver (33-38 points), gold (39-51 points), and platinum (52-69 points) ratings also are available.

UNI Eco-Stone® permeable pavements may qualify for points under the Sustainable Sites, Material and Resources, Water Efficiency, and Innovation and Design Process credits. While traditional concrete pavers also may qualify under some of the credits, PICP can earn points via Water Efficiency and Sustainable Sites stormwater management credits by meeting water quality and runoff treatment criteria.

For years, most home builders and developers were wary of green building practices. However, with impervious cover restrictions and the increasing costs of energy now beginning to impact residential projects, the NAHB is encouraging the use of “green” products in single and multi-family developments. Eco-Stone® permeable pavement offers an attractive solution to impervious cover restrictions.



*Private Residence - Long Island, NY*

## ECO-STONE® AND MUNICIPAL STORM-WATER MANAGEMENT OBJECTIVES

Municipal regulations for managing stormwater runoff vary across the country. Water quality and/or quantity may be regulated, with criteria for reducing water pollutants such as nitrogen, phosphorous, nitrates, metals, and sediment. Many municipalities now restrict the amount of impervious surfaces for virtually all types of construction, including private residences. Thousands of municipalities have created stormwater utilities to fund the increasing costs of managing stormwater. These fees vary, but are usually based on runoff volumes and impervious cover.



*Lafayette Road Office Park - North Hampton, NH*

Regional authorities, counties, and municipalities use a number of design goals for managing stormwater runoff:

- Limit impervious cover to reduce stormwater runoff and pollutants from developments
- Capture the entire stormwater volume so there is zero discharge from the drainage area
- Capture and treat stormwater runoff to remove a stated percentage of pollutants
- Capture and treat a fixed volume of runoff, typically 0.75-1.5 in. (18-40 mm), which usually contains the highest level of pollutants
- Maintain runoff volumes generated by development at or near pre-development levels
- Maintain groundwater recharge rates to sustain stream flows and ecosystems and recharge aquifers

Eco-Stone® permeable interlocking concrete pavements may offer solutions for attaining all of these goals. PICP can reduce runoff volumes and flows and recharge groundwater. It also can filter pollutants with removal rates of 60-90% total suspended solids, 65% total phosphorous, 50-89% copper, and 62-88% zinc. Reduction of runoff also may offer property owners reductions in stormwater utility fees.



## FEATURES AND BENEFITS OF THE UNI ECO-STONE® PAVEMENT SYSTEM

Eco-Stone® is an attractive pavement that can be used for residential, commercial, institutional, and recreational pedestrian and vehicular applications. It can be used for parking lots, driveways, overflow parking, emergency lanes, walkways, low-speed roadways, alleys, and storage facilities. *Permeable or porous pavements should not be used for any site classified as a stormwater hotspot* (anywhere there is a risk of stormwater contaminating groundwater, such as fueling and maintenance stations, hazardous materials or chemical storage sites, or land uses that drain pesticides or fertilizers onto permeable pavements).

UNI Eco-Stone® permeable pavements are a site-scale infiltration technology that is ideal for meeting NPDES regulations, LID and Smart Growth objectives, LEED® certification, municipal and regional impervious cover restrictions, and green building requirements.

- Can be designed to accommodate a wide variety of stormwater management objectives
- Runoff volume reductions of up to 100% depending on project design parameters
- Maximizes groundwater recharge and may be used for rain water harvesting for re-use
- Reduces nonpoint source pollutants in stormwater, thereby mitigating impact on surrounding surface waters, and may lessen or eliminate downstream flooding and streambank erosion
- Allows better land-use planning and more efficient use of available land for greater economic value, especially in high-density, urban areas
- May decrease project costs by reducing or eliminating drainage and retention/detention systems
- May reduce cost of compliance with stormwater regulatory requirements and lower utility fees
- May reduce heat island effect and thermal loading on surrounding surface waters



Glen Brook Green, Jordan Cove Watershed - Waterford, CT

Examples of pollutant removal and infiltration rates for Eco-Stone® are shown in Tables 1 and 2. This data is from the Jordan Cove Urban Watershed Project 2003 Annual Report by the University of Connecticut, who conducted

monitoring on this EPA Section 319 National Monitoring Project. It should be noted that these infiltration results were achieved using a dense-graded base. Even higher infiltration rates would be expected with open-graded bases.

Test and Year	Asphalt	Eco-Stone® in./hr (cm/hr)	Crushed Stone in./hr (cm/hr)
Single Ring Infiltrometer test 2002	0	7.7 (19.6)	7.3 (18.5)
Single Ring Infiltrometer test 2003	0	6 (15.3)	5 (12.7)
Flowing Infiltration test 2003	0	8.1 (20.7)	2.4 (6)

Table 1. Average infiltration rates from asphalt, Eco-Stone® and crushed stone Jordan Cove Urban Watershed Project

Variable	Asphalt	Eco-Stone Pavement	Crushed Stone
Runoff depth, mm	1.8 a	0.5 b	0.04 c
Total suspended solids, mg/l	47.8 a	15.8 b	33.7 a
Nitrate nitrogen, mg/l	0.6 a	0.2 b	0.3 ab
Ammonia nitrogen, mg/l	0.18 a	0.05 b	0.11 a
Total Kjeldahl nitrogen, mg/l	8.0 a	0.7 b	1.6 ab
Total phosphorous, mg/l	0.244 a	0.162 b	0.155 b
Copper, ug/l	18 a	6 b	16 a
Lead, ug/l	6 a	2 b	3 b
Zinc, ug/l	87 a	25 b	57 ab

Table 2. Mean weekly pollutant concentration in stormwater runoff from asphalt, Eco-Stone® and crushed stone driveways - Note: Within each variable, means followed by the same letter are not significantly different at  $\alpha = 0.05$

Note: Stormwater runoff volume from the LID subdivision after construction was 42% less than runoff from the site prior to development.

## ECO-STONE® DESIGN AND GENERAL CONSTRUCTION GUIDELINES

UNI-GROUP U.S.A. offers design professionals a variety of tools for designing Eco-Stone® permeable pavements. Research on Eco-Stone® has been conducted at major universities such as Texas A&M, University of Washington, and Guelph University, and ongoing pollution monitoring is being conducted at EPA Section 319 National Monitoring Program sites Jordan Cove Urban Watershed Project in Connecticut and Morton Arboretum in Illinois. We offer design manuals, case studies, and Lockpave® Pro structural interlocking pavement design software, with PC-SWMM PP™ for hydraulic design of Eco-Stone® permeable pavements. Eco-Stone® is featured in the book *Porous Pavements* by Bruce Ferguson, a national authority on stormwater infiltration. And, as members of the Interlocking Concrete Pavement Institute, we can offer additional design and reference information, such as ICPI's *Permeable Interlocking Concrete Pavements* manual, Tech Specs™ and CAD files.

It is recommended that a qualified civil engineer with knowledge in hydrology and hydraulics be consulted for applications using permeable interlocking concrete pavement to ensure desired results. Information provided is intended for use by professional designers and is not a substitute for engineering skill or judgement. It is not intended to replace the services of experienced, professional engineers.



## Design Options - Full, Partial and No Infiltration

Eco-Stone® pavements can be designed with full, partial, or no infiltration into the soil subgrade. Optimal installation is infiltration through the base aggregate, with complete infiltration into a permeable subgrade. This allows for not only runoff and pollutant reduction, but also groundwater recharge. For full infiltration under vehicular loads, the minimum soil infiltration rate is typically 0.52 in./hr ( $3.7 \times 10^{-6}$  m/sec). Where soil conditions limit the amount of infiltration and only partial infiltration can be achieved, some of the water may need to be drained by perforated pipe. Where soils have extremely low or no permeability, or conditions such as high water tables, poor soil strength, or over aquifers where there isn't sufficient depth of the soil to filter pollutants, no exfiltration should occur. An impermeable liner is often used and perforated pipe is installed to drain all stored water to an outfall pipe. This design still allows for infiltration of stormwater and some filtering of pollutants and slows peak rates and volumes, so it still can be beneficial for managing stormwater. For extreme rainfall events, any overflows can be controlled via perimeter drainage to bio-retention areas, grassed swales or storm sewer inlets.



Ash Avenue Park and Ride - Marysville, WA

## Infiltration Rate Design

Permeable interlocking concrete pavements are typically designed to infiltrate frequent, short duration storms, which make up 75-85% of rainstorms in North America. It also may be possible to manage runoff volumes from larger storms through engineering design and the use of complementary BMPs, such as bio-retention areas and swales.

One of the most common misconceptions when designing or approving PICP is the assumption that the amount or percentage of open surface area of the pavement is equal to the percentage of perviousness. For example, a designer or municipal agency might incorrectly assume that a 15% open area is only 15% pervious. The permeability and amount of infiltration are dependent on the infiltration rates of the aggregates used for the joint and drainage openings, the bedding layer, and the base and subbase (if used). Compared to soils, the materials used in Eco-Stone® permeable pavements have very high infiltration rates – from 500 in./hr (1270 cm/hr) to over 2000 in./hr (5080 cm/hr). This is much more pervious than existing site soils.



Private Residence - Minneapolis, MN

Though initial infiltration rates are very high, *lifetime* design infiltration of the entire pavement cross-section, including the soil subgrade, should be considered when designing PICPs. Research has documented rates of over 16 in./hr after 10 years with minimal to no maintenance, however, designers may wish to use a conservative rate of 10 in./hr (25 cm/hr) as the basis for the design surface infiltration rate over a 20 to 25-year pavement life.

A number of design methods may be used for sizing of the open-graded base (see references). For designers who use Natural Resources Conservation Service (NRCS) curve numbers (CN) in determining runoff calculations, the curve number for PICP can range from 45-80. If using coefficient of runoff (C value) for peak runoff calculations, based on research to date, PICP ranges from 0.00-0.30. These ranges are significantly less than those for impervious pavements. The values used will depend on soil infiltration rates, base storage capabilities, and area design storms.

## Construction Materials and General Installation

Site soils should not be compacted if structural strength is suitable, as compaction reduces infiltration rates. Low CBR soils (<5%) may require compaction, additional base material, or stabilization for vehicular traffic applications. Drains also would typically be required for low CBR soils. If soils must be compacted, the reduced infiltration rates should be factored into the design. Permeable pavements provide maximum infiltration with slopes of 5% or less. It may be used on sites with steeper slopes with proper design.



Goodbys Marina - Jacksonville, FL



Permeable interlocking concrete pavements are typically built over open-graded aggregate bases consisting of washed, hard, crushed stone, though a variety of aggregate materials, including dense-graded, may be used depending on project parameters. Typically, stone materials should have less than 1% fines passing the No. 200 sieve.

Current industry recommendations include a subbase of open-graded aggregate (typically ASTM No. 2 or No. 3, or equivalent) at a minimum thickness of 6 in. (150mm) for pedestrian applications and 8 in. (200mm) for vehicular applications. This makes it easier for contractors to install the base materials. A base layer of open-graded aggregate (typically ASTM No. 57 or equivalent) is installed over the subbase. This helps meet filter criteria between the layers. The recommended thickness for this layer is 4 in. (100mm). It may be possible, however, to use a single material for the base and subbase depending on project design parameters and contractor experience. Open-graded materials described here typically have a water storage void space between the aggregates of between 30-40%, which maximizes storage of infiltrated stormwater.

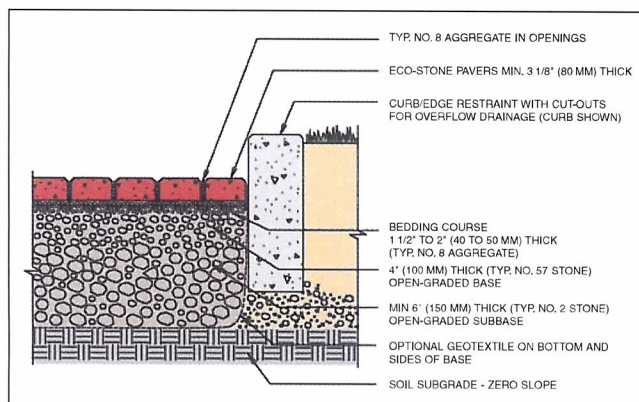


Figure 4 - Typical Cross-Section of an Eco-Stone® Permeable Pavement Full Infiltration

For the bedding layer, material equivalent to ASTM No. 8 stone is recommended. This same material is used to fill the drainage openings and joints. If desired, material equivalent to No. 87, 89, or 9 stone also may be used to fill smaller joints between the pavers. Bedding and jointing sand used in the construction of traditional interlocking concrete pavements should not be used for PICP.



Private Residence - Danvers, MA



The College School of Webster Groves - St. Louis, MO

UNI Eco-Stone® can be mechanically installed and trafficked immediately after final compaction, unlike other types of porous pavements. It has been used successfully for many years throughout North America and can withstand repeated freeze/thaw due to adequate space for ice to expand within the open-graded base. PICP can be snow plowed, and because water drains through the surface, it reduces ice slipping hazards. Studies are demonstrating that less deicing materials are required on permeable and porous pavements. Winter sanding is not recommended for PICPs. Permeable interlocking concrete pavement conforms to current ADA requirements that surfaces be firm, stable, and slip resistant. If the openings in the surface are not desirable, solid pavers can be installed in areas used by disabled persons.

## Maintenance

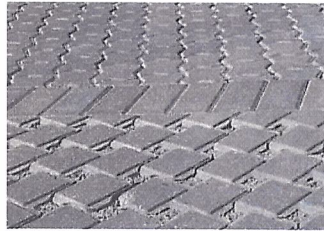
Like all infiltration BMPs, permeable pavements require periodic cleaning, and sediment must be kept off the pavement during and after construction. Studies and field experience have shown that vacuum-type street cleaning equipment is most effective for removing sediment from the openings to regenerate infiltration. Vacuum settings may require adjustment to prevent the uptake of aggregate in the pavement openings and joints. The surface should be dry when cleaning. Aggregate in the joints and openings should be kept full and replenished if needed. The frequency of cleaning is dependent on traffic levels. It is generally recommended to vacuum the pavement surface at least once or twice a year, though some low-use pavements may not need cleaning as often. As street cleaning is a BMP under EPA guidelines, this also satisfies other criteria in a comprehensive stormwater management program.

If properly constructed and maintained, PICP should provide a service life of 20 to 25 years. Like our traditional interlocking concrete pavers, Eco-Stone® may be taken up and reinstated if underground repairs are needed. If at the end of its design life the pavement no longer infiltrates the required amount of stormwater runoff, PICP is the only type of permeable pavement that can be taken up, the base materials removed and replaced, and the pavers reinstalled.



## UNI ECOLOC® HEAVY-DUTY PERMEABLE INTERLOCKING CONCRETE PAVEMENT

Ecoloc® features all the same attributes and features of our Eco-Stone® permeable paver with the added benefit of supporting industrial loads. It can be used together with our industrial traditional interlocking paver, UNI-Anchorlock® to provide design professionals with the option of combining solid pavement areas with permeable areas.



*Ecoloc® with UNI-Anchorlock®*

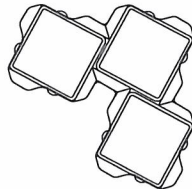
Like Eco-Stone®, Ecoloc® features funnel-shaped openings that facilitate the infiltration of stormwater runoff. Physical characteristics are described in Figure 5.

### Physical Characteristics

Height/Thickness	3 1/8"	= 80mm
Width	8 7/8"	= 225mm
Length	8 7/8"	= 225mm
Pavers per sq ft		= 2.41
Percentage of drainage void area per sq ft		= 12.18%

### Composition and Manufacture

Minimum compressive strength - 8000psi  
Maximum water absorption - 5%  
Meets or exceeds ASTM C-936 and freeze-thaw testing per section 8 of ASTM C-67.



*Figure 5*

Ecoloc® can be mechanically installed and is ideal for larger-scale projects such as parking lots, roadways, storage and depot areas, and ports. Over 173,000 sf of Ecoloc® was used for an EPA Section 319 National Monitoring Permit



*Seneca College - Toronto, Ontario*

Project at Morton Arboretum in Illinois. It also is in use at a test site located at Howland Hook Terminal at the Port of New York/New Jersey that is subjected to heavy, containerized loads, port forklifts and cargo carriers. Another 30,000 sf of Ecoloc® was installed at the East Gwillimbury Go Commuter Train Station parking lot in Newmarket, Ontario.



*Morton Arboretum - DuPage County, IL*

In addition, Ecoloc® is undergoing an evaluation at Seneca College in Ontario for the Toronto and Region Conservation Authority to study permeable interlocking concrete pavement performance in cold climates conditions.

Please check with your local UNI® manufacturer for availability of Ecoloc® in your area.

Also, ask about Eco-Priora™ and Eco-Optiloc®, the newest additions to the Eco-Stone® family of permeable pavers. Please visit our website [www.uni-groupusa.org](http://www.uni-groupusa.org) for updated information, design references and research, a list of manufacturers, and more.



*East Gwillimbury Go Commuter Train Station - Newmarket, Ontario*

### REFERENCES & RESOURCES

- Annual Report - Jordan Cove Urban Watershed Section 319 National Monitoring Program Project, University of Connecticut, 2003
  - UNI Eco-Stone® Design Guide and Research Summary
  - Lockpave® Pro structural design software with PC-SWMM™ PP hydraulic design software
  - Porous Pavements - Bruce K. Ferguson, CRC Press, 2005
  - Permeable Interlocking Concrete Pavements - Interlocking Concrete Pavement Institute, 2012
- A special thank you to the Interlocking Concrete Pavement Institute for use of some project photos.*
- Front cover photos: Eco-Stone® - Private Residence Cape Cod, MA and Ecoloc® - Westmoreland Street Project - Portland, OR*

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## **Attachment D**

### **WQMP Notice of Transfer of Responsibility**

TO BE INCLUDED IN FINAL WQMP

## **Attachment E**

### **Infiltration Report and Soils Report**

*July 25, 2019**W.O. 288219*

DMS Consultants, Inc.  
12377 Lewis Street #101  
Garden Grove, CA 92840

Subject: Percolation Infiltration Testing, Storm Water  
Management, Proposed 8-Unit Apartments,  
305 N. Mountain View, Santa Ana, California.

Ref: *STRATA-TECH, INC.; "Preliminary Geotechnical Investigation for Proposed 8-Unit  
Apartments, 305 N. Mountain View, Santa Ana, California.", July 25, 2019,  
W.O. 288219*

Gentlemen:

In accordance with your authorization and terms of our contract STRATA-TECH, Inc. is pleased to submit the results of our storm water infiltration testing.

Falling head percolation testing was performed in two Pits at the locations shown on the attached conceptual plan.

The soils encountered consist of Tan-lt-gray, silty, fn sand, Silt, fn sandy to 5-feet. Logs of the Pits are attached. The percolation pit bottoms are substantially separated from seasonal groundwater. Ground water was encountered in adjacent borings that were dry to 8.5 feet from existing ground surface. Historical Groundwater is reported 6 feet below ground surface in the early 1900's.

Testing was performed in 4-foot dry wells consisting of 4-inch slotted well screen with .020" openings in an 8" diameter hand borings having the annular space packed with #3 Monterey filter sand to prevent caving. Hand borings were prepared 7/22/19

The cased pits were filled with water for pre soak on 7/22/19 and the percolation test conducted immediately following the pre soak which confirmed sand condition criteria as outlined in OC\_TGD\_5-19-11 Appendix VII.



**STRATA-TECH, INC.**  
**G E O C O N S U L T A N T S**

DMS Assoc, Inc.

2

July 25, 2019

Preliminary Storm Water Percolation Testing

305 N. Mountain View St., Santa Ana, California

The testing consisted of filling each 4-foot pit with water to within 2-feet of the surface and allowing it to seep for 10 min intervals and repeatedly filling the test pit and measuring the stabilized rate at the end of 6<sup>th</sup> cycle. The drop between successive measurements was recorded for each pit and is the basis for the calculated infiltration rate.

The lowest calculated infiltration rate of 6.2 inch/Hr. may be used by the design civil engineer for the infiltration system design for the subject site.

Although the infiltration rate is high in relatively clean sand the separation from groundwater with the present grades is 3.5 feet. The required separation is 10 feet.

At the completion of testing the well screens were pulled and remaining holes filled with bentonite chips and covered with sod.

The work performed was carried out in accordance with acceptable geotechnical principles common to the local area in which we practice. We make no other warranties, either expressed or implied.

Respectfully submitted:

STRATA-TECH, INC.

Roland Acuña, PG  
President



Larry Finley  
RCE 46606

Enclosures:

Appendix; A

- Plate 1 – Pit/Perc Location Map
- Plate 2 – Test Pit Logs
- Plate 3 – Test Results

## APENDIX A

Plot Plan, Boring Logs and Test Results

LINE	DATE	DESCRIPTION	AMOUNT
1	10/26/01	10/26/01	10/26/01

**DMS**  
**CONSULTANTS.**  
ENVIRONMENTAL

STEVEN R. JONES  
PI: 714-813-0752

REVISIONS

REV.	DATE	BY	REVISION
1	10/1/77	WJ	ADDED
2	10/1/77	WJ	ADDED
3	10/1/77	WJ	ADDED
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5	10/1/77	WJ	ADDED
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100	10/1/77	WJ	ADDED

BEARINGS ID WITH ONE ON BASED ON CENTERLINE OF  
SECTION 18W ST BEING 142° 7' 0" W 50' 0" BY T.L. C  
AND 122° 11' 0" BY 53' 41" 46' 47" IN THE CITY OF SANTA  
BARBARA, COUNTY OF SANTE BARBARA, STATE OF CALIFORNIA.

SUMMARY OF BORING NO. B-1				
Date: 7/22/2019				
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples C B	Depth (Ft.)	Description
				Lt-Grayn, Sand, fn, silty dry
				Buff , clean fn-med sand
			5	Buff fn-crs Sand, clean,damp
				Sand, fn, trace of silt, wet, capillary fringe
			10	End of boring at 10 feet water @ 9' pinching @ 8
			15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California				Work Order 288219 Plate No.
<b>STRATA - TECH, INC.</b>				

SUMMARY OF BORING NO. B-3					
Date: 7/22/2019					
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples U B		Depth (Ft.)	Description
					Lt-Grayn, Sand, fn, silty dry
					Buff , clean fn-med sand
				5	End of boring at 5 feet no water, no caving
				10	
				15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California					Work Order 288219 Plate No.
STRATA - TECH, INC.					

SUMMARY OF BORING NO. B-3					
Date: 7/22/2019					
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples U B		Depth (Ft.)	Description
					Lt-Grayn, Sand, fn, silty dry
					Buff , clean fn-med sand
				5	End of boring at 5 feet no water, no caving
				10	
				15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California					Work Order 288219 Plate No.
STRATA - TECH, INC.					

July 25, 2019

W.O. 288219

DMS Consultants, Inc.  
12377 Lewis Street #101  
Garden Grove, CA 92840

Subject: Preliminary Geotechnical Investigation for  
Proposed 8-Unit Apartments, 305 N.  
Mountain View, Santa Ana, California.

Dear Mr. Dewan:

Pursuant to your request, a geotechnical investigation has been performed at the subject site. The purposes of the investigation were to determine the general engineering characteristics of the soils on and underlying the site and to provide recommendations for the design of foundations and underground improvements.

#### **PROPOSED DEVELOPMENT**

It is our understanding that the proposed development will consist of demolition of the existing single-story wood-frame house and construction of 6 townhomes. Structural loads are unknown at this time but are anticipated on the order of 2 kips per lineal foot for wall loads and 30 kips column loads.

#### **PURPOSE AND SCOPE OF SERVICES**

The scope of the study was to obtain subsurface information within the project site area and to provide recommendations pertaining to the proposed development and included the following:

1. A cursory reconnaissance of the site and surrounding areas.
2. Excavation of three exploratory borings by auger drill to determine the subsurface soil, groundwater conditions and infiltration testing.



3. Collection of representative bulk and/or undisturbed soil samples for laboratory analysis.
4. Laboratory analyses of soil samples including determination of in-situ and maximum density, in-situ and optimum moisture content, shear strength and consolidation characteristics, expansion potential, sulfate content, and liquefaction evaluation.
5. Preparation of this report presenting results of our investigation and recommendations for the proposed development.

### **SITE CONDITIONS**

The subject site is located at 305 N. Mountain View Street, Santa Ana, California. The site is located on the attached Site Vicinity Map, Plate 1.

The site is an essentially level rectangular lot with approximately 108 feet of frontage on the east side of Mountain View Street. Currently, one single-family residences, garage and fruit trees occupy the property.

Site conditions are shown on the Site Plan, Plate 2.

### **FIELD INVESTIGATION**

The field investigation was performed on July 22, 2019 consisting of excavation of three exploratory auger borings at the locations shown on the attached Site Plan, Plate 2. As drilling progressed, personnel from this office visually classified the soils encountered, collected data, and secured representative samples for laboratory testing.

Description of the soils encountered is presented on the attached Boring Log, Plates 3A, 3B and 3C. The data presented on this log is a simplification of actual subsurface conditions encountered and applies only at the specific boring location and the date excavated. It is not warranted to be representative of subsurface conditions at other locations and times.

### **EARTH MATERIALS**

A representative from STRATA-TECH, INC visually logged earth materials encountered within the exploratory test borings. The materials were classified as artificial fill and native soils.

The artificial fills as encountered in the borings were about 1 to 1.5 feet in depth consisting of ft gray fn-med Sand.

Native soils consisted of clean, very fine-med Sand to the maximum depth explored. Earth materials are further described on the attached boring logs, Plates 3A, 3B, and 3C.

## **SEISMICITY**

Southern California is located in an active seismic region. Moderate to strong earthquakes can occur on numerous faults. The United States Geological Survey, California Division of Mines and Geology, private consultants, and universities have been studying earthquakes in Southern California for several decades. Early studies were directed toward earthquake prediction estimation of the effects of strong ground shaking. Studies indicate that earthquake prediction is not practical and not sufficiently accurate to benefit the general public. Governmental agencies are shifting their focus to earthquake resistant structures as opposed to prediction. The purpose of the code seismic design parameters is to prevent collapse during strong ground shaking. Cosmetic damage should be expected.

The principal seismic hazard to the subject property and proposed project is strong ground shaking from earthquakes produced by local faults. Secondary effects such as surface rupture, lurching, or flooding are not considered probable. Liquefaction and seismically induced settlement are discussed in the following sections of this report.

## **LIQUEFACTION**

Liquefaction is a process by which soil below the water table temporarily loses strength and behaves as a viscous liquid rather than a solid. The types of soil most susceptible to liquefaction are clay-free deposits of sand and silts. Liquefaction is caused by seismic waves, primarily shear waves, passing through saturated, granular layers distorting the granular structures and causing loosely packed groups of particles to collapse. These collapses increase the pore water pressure between the grains, if drainage cannot occur. If the pore water pressure rises to a level approaching the weight of the overlying soil, the granular layer temporarily behaves as a viscous liquid rather than a solid, and liquefaction has occurred.

Based on the "Seismic Hazards Zone Map" published by the State of California, March 1998, Newport Beach Quadrangle, the site is in an area where historic occurrences of liquefaction, or local geologic, geotechnical, or groundwater conditions indicate a potential for liquefaction. Historical ground water is -5 bgs Water was encountered at 8.5 bgs.

The level to which the liquefaction potential is mitigated is a function of assumed risk. The following options are presented:

### **Option 1 - High Risk**

Structure is not designed to accommodate any differential settlements and may suffer significant distress during max credible settlements.

### **Option 2 – Moderate Risk**

Structure is designed to accommodate limited differential settlements and may sustain minor cracking induced by seismic settlements.

To provide moderate risk from the potential liquefaction effects, the structure shall be placed on a compacted fill mat, foundations shall be continuous or tied together with grade beams, foundations shall be reinforced with a minimum of four #4 bars, two top and two bottom, concrete slabs shall be a minimum of 4 inch actual thickness with #3 bars on 18 inch centers each way, and shall be tied into foundations. These are minimum geotechnical recommendations. Additionally, the structural engineer shall apply the latest seismic building codes in design.

### **Option 3 – Low Risk**

Structure is designed to withstand complete loss of ground support from major earthquake, along with possible large scale ground subsidence and lateral spreading.

## **CONCLUSIONS AND RECOMMENDATIONS**

Development of the site as proposed is considered feasible from a soils engineering standpoint, provided that the recommendations stated herein are incorporated in the design and are implemented in the field. Recommendations are subject to change based on review of final foundation and grading plans.

Since surface soils will be disturbed due to removal of the existing structures, it is recommended that the proposed structures be entirely supported by compacted fill. A minimum 3-foot compacted fill blanket below the bottom of footings is recommended.

For other minor structures like property line walls or retaining walls less than 4 feet high, competent native soils or compacted fill may be used.

## **PROPOSED GRADING**

Grading plans were not available at the time our work was performed. It is assumed that proposed grades will not differ significantly from existing grades. The following recommendations are subject to change based on review of final grading plans.

## **GRADING RECOMMENDATIONS**

Removal and recompaction of existing fill and loose native soils will be required to provide adequate support for foundations and slabs on grade.

Earthwork for foundation support shall include the entire building pad and shall extend a minimum of 5 feet outside exterior footing lines.

At the time of our investigation, groundwater was encountered at the depth of 8.5 feet below the existing grade.

Removals shall extend downward into competent earth materials or to at least 2 feet below proposed footing bottoms, whichever is deeper. Average removal depth is estimated at 3-4 feet.

The exposed excavation bottom shall be observed and approved by STRATA-TECH, Inc. prior to processing. Dependent on field observations, removals may be adjusted up or down. It may become necessary to stabilize wet pumping ground with  $\frac{3}{4}$  inch crushed rock enveloped in filter cloth a minimum thickness of 1 1/2 foot.

Subsequent to approval of the excavation bottom, the area shall be scarified 6 inches, moisture conditioned as needed, and compacted to a minimum of 90 percent relative compaction.

Fill soils shall be placed in 6 to 8 inch loose lifts, moisture conditioned as needed, and compacted to a minimum of 90 percent relative compaction. This process shall be utilized to finish grade.

Grading for hardscape areas shall consist of removal and recompaction of soft surficial soils. Removal depths are estimated at 1 to 2 feet. Earthwork shall be performed in accordance with previously specified methods.

The soil engineer shall review grading and/or foundation plans. Recommendations are subject to modification upon review of plans.

#### **FOUNDATIONS ON COMPACTED FILL**

The proposed apartment units may be supported by continuous spread footings only placed a minimum depth of 24 inches below lowest adjacent finished grade utilizing an allowable bearing value of 1500 pounds per square foot. For column loads square pad footings may be utilized when connected by grade beams and may be designed for an allowable bearing value of 1800 psf. These values are for dead plus live load and may be increased 1/3 for total including seismic and wind loads where allowed by code.

It is recommended that all footings be reinforced with a minimum of two No. 4 bars (1 top and 1 bottom). The structural engineer's reinforcing requirements shall govern.

A representative of STRATA-TECH prior to placement of shall observe footing excavations steel or concrete to verify competent soil conditions. If unacceptable soil conditions are exposed mitigation will be recommended.

## **CHEMICAL ANALYSIS**

An onsite soil sample has been analyzed for soluble sulfates, soluble chloride, minimum resistivity and ph. . The soils are not considered corrosive to metal pipes or concrete.

## **LATERAL DESIGN**

Lateral restraint at the base of footings and on slabs may be assumed to be the product of the dead load and a coefficient of friction of .35. Passive pressure on the face of footings may also be used to resist lateral forces. A passive pressure of zero (0) at the surface of finished grade, increasing at the rate of 350 pounds per square foot of depth to a maximum value of 3500 pounds per square foot, may be used for compacted fill or native soils at this site. If passive pressure and friction are combined when evaluating the lateral resistance, the value of the passive pressure should be limited to 2/3 of the values given above.

## **RETAINING WALLS**

Unrestrained walls retaining drained earth may be designed for the following:

Surface Slope of Retained Material Horizontal to Vertical	Equivalent Fluid Pressure Pounds Per Cubic Foot
Level	30
5 to 1	32
4 to 1	35
3 to 1	38
2 to 1	43

Backfill should consist of clean sand and gravel. While all backfills should be compacted to the required degree, extra care should be taken working close to walls to prevent excessive pressure. Retaining walls should include subdrains consisting of 4 inch, SCH 40 or SDR 35 perforated pipe surrounded by 1 cubic foot per lineal foot of crushed rock. All wall backfill should be compacted to a minimum of 90 percent relative compaction.

All retaining structures should include appropriate allowances for anticipated surcharge loading, where applicable. In this regard, a uniformly distributed horizontal load equal to one-half the vertical surcharge shall be applied when the surcharge is within a horizontal distance equal to the wall height.

Retaining wall footing excavations shall be founded entirely in competent native soils or compacted fill. Footing bottoms shall be observed by a representative of STRATA-TECH, Inc., to verify competent conditions.

## **EXPANSIVE SOILS**

Results of expansion tests indicate that the near surface soils have a low to very low expansion potential.

## **SEISMIC DESIGN**

Based on the NEHRP-2015 the site is assigned soil profile  $S_d$ . The near source fault to the subject site is the Newport-Inglewood Fault, about 8 km from the site. This fault is a Type A fault with a magnitude of 6.8,  $PGA = 0.566$ ; Coordinates: 33.7471887, -117.92732060000003

The following seismic factors may be utilized in design:

$S_S$	1.326	$MCE_R$ ground motion (period=0.2s)
$S_1$	0.472	$MCE_R$ ground motion (period=1.0s)
$S_{MS}$	1.591	Site-modified spectral acceleration value
$S_{M1}$	0.863	Site-modified spectral acceleration value
$S_{DS}$	1.061	Numeric seismic design value at 0.2s SA
$S_{D1}$	0.576	Numeric seismic design value at 1.0s SA

## **SETTLEMENT**

The maximum total post-construction settlement is anticipated to be on the order of 1/2 inch. Differential settlements are expected to be less than 1/2 inch, measured between adjacent structural elements.

## **SUBSIDENCE & SHRINKAGE**

Subsidence over the site is anticipated to be on the order of 0.25 feet. Shrinkage of reworked materials should be in the range of 10 to 15 percent.

## **FLOOR SLABS**

The surface soils are non-plastic.

If a slab on grade is utilized, the slab shall be supported on engineered fill compacted to a minimum of 90 percent relative compaction. Slabs should be reinforced with at least No. 3 bars 18 inches on center both ways.

The soil should be kept moist prior to casting the slab. However, if the soils at grade become disturbed during construction, they should be brought to approximately optimum moisture content and rolled to a firm, unyielding condition prior to placing concrete.

In areas where a moisture sensitive floor covering will be used, a vapor barrier consisting of a plastic film (6 ml polyvinyl chloride or equivalent) should be used. The vapor barrier should be properly lapped and sealed. Since the vapor barrier will prevent moisture from draining from fresh concrete, a better concrete finish can usually be obtained if at least 2 inches of sand is spread over the vapor barrier prior to placement of concrete.

#### **UTILITY LINE BACKFILLS**

All utility line backfills, both interior and exterior, shall be compacted to a minimum of 90 percent relative compaction and shall require testing at a maximum of 2 foot vertical intervals.

#### **HARDSCAPE AND SLABS**

Hardscape and slab subgrade areas shall exhibit a minimum of 90 percent relative compaction to a depth of at least 1 foot. Deeper removal and recompaction may be required if unacceptable conditions are encountered. These areas require testing just prior to placing concrete.

#### **DRAINAGE**

Positive drainage should be planned for the site. Drainage should be directed away from structures via non-erodible conduits to suitable disposal areas. The structure should utilize roof gutters and down spouts tied directly to yard drainage.

Unlined flower beds, planters, and lawns should not be constructed against the perimeter of the structure. If such landscaping (against the perimeter of a structure) is planned, it should be properly drained and lined or provided with an underground moisture barrier. Irrigation should be kept to a minimum.

#### **ENGINEERING CONSULTATION, TESTING & OBSERVATION**

We will be pleased to provide additional input with respect to foundation design once methods of construction and/or nature of imported soil has been determined.



This office prior to commencement of grading should review grading and foundation plans so that appropriate recommendations, if needed, can be made.

Areas to receive fill should be inspected when unsuitable materials have been removed and prior to placement of fill, and fill should be observed and tested for compaction as it is placed.

### **AGENCY REVIEW**

All soil, geologic and structural aspects of the proposed development are subject to the review and approval of the governing agency(s). It should be recognized that the governing agency(s) could dictate the manner in which the project proceeds. They could approve or deny any aspect of the proposed improvements and/or could dictate which foundation and grading options are acceptable. Supplemental geotechnical consulting in response to agency requests for additional information could be required and will be charged on a time and materials basis.

### **LIMITATIONS**

This report presents recommendations pertaining to the subject site based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed by our exploratory excavations. Our recommendations are based on the technical information, our understanding of the proposed construction, and our experience in the geotechnical field. We do not guarantee the performance of the project, only that our engineering work and judgments meet the standard of care of our profession at this time.

In view of the general conditions in the area, the possibility of different local soil conditions may exist. Any deviation or unexpected condition observed during construction should be brought to the attention of the Geotechnical Engineer. In this way, any supplemental recommendations can be made with a minimum of delay necessary to the project.

If the proposed construction will differ from our present understanding of the project, the existing information and possibly new factors may have to be evaluated. The Geotechnical Consultant should review any design changes and the finished plans. Of particular importance would be extending development to new areas, changes in structural loading conditions, postponed development for more than a year, or changes in ownership.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans and that the necessary steps are taken to see that the contractors and subcontractors carry out such recommendations in the field.

This report is subject to review by the controlling authorities for this project.

**STRATA-TECH, INC.**  
**G E O C O N S U L T A N T S**

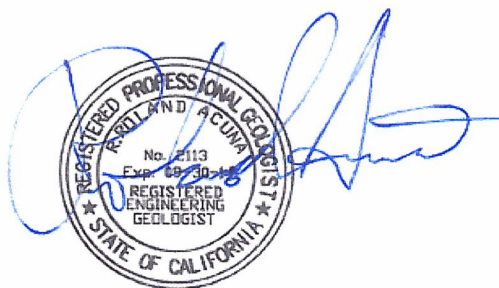
DMS Consultants, Inc.  
Preliminary Geotechnical Investigation

10

W.O. 288219  
July 25, 2019

We appreciate this opportunity to be of service to you.

Respectfully submitted:  
STRATA-TECH, INC.

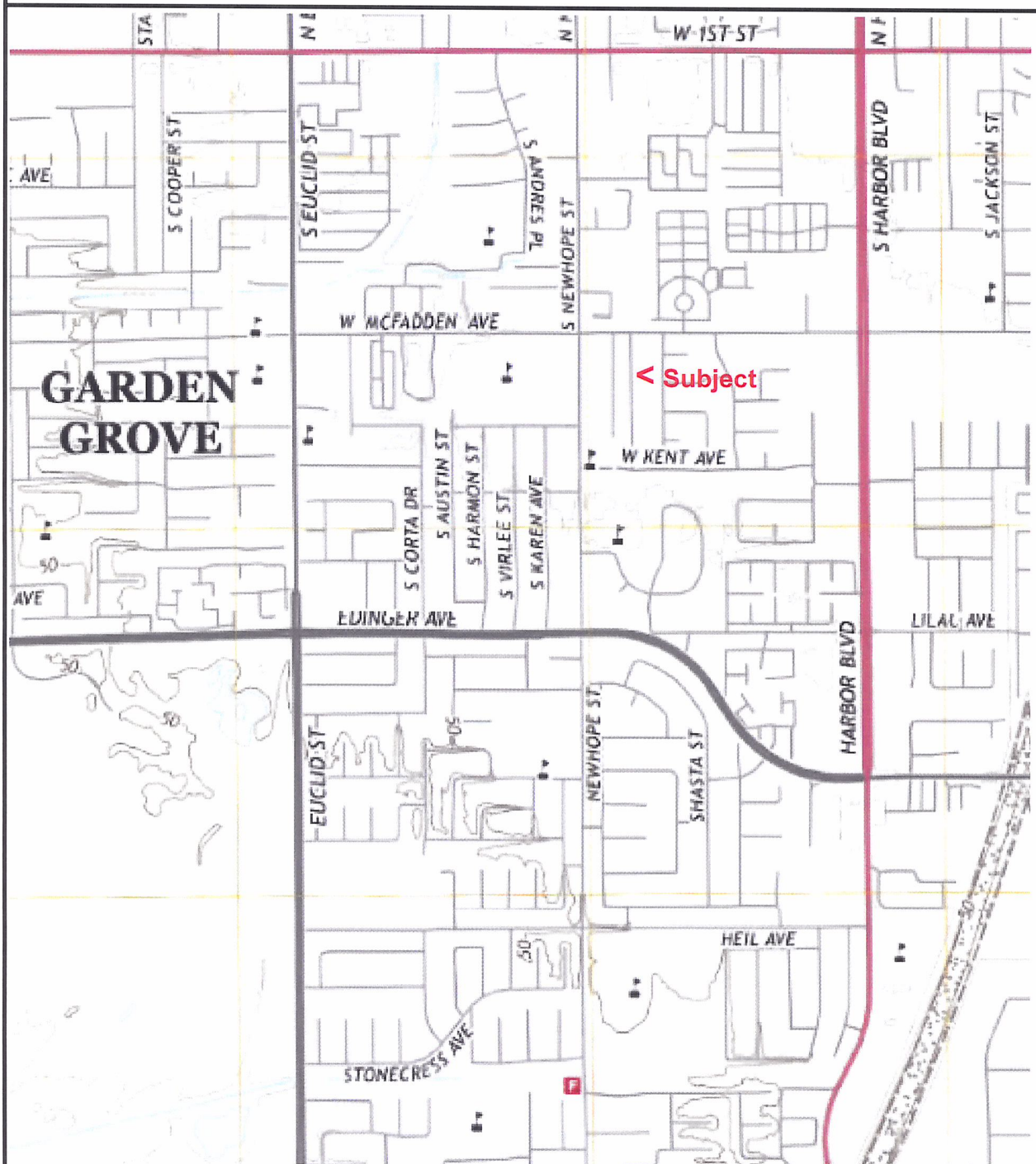
A blue ink signature of Roland Acuña is written over a circular professional seal. The seal is for a Registered Professional Geologist, State of California, No. 2113, Exp. 09-30-18. The text inside the seal includes "REGISTERED PROFESSIONAL GEOLOGIST", "ROLAND ACUÑA", "No. 2113", "Exp. 09-30-18", "REGISTERED ENGINEERING GEOLOGIST", and "STATE OF CALIFORNIA".

Roland Acuña, CEG  
President

A black ink signature of Larry Finley is written over a circular professional seal. The seal is for a Registered Professional Engineer, State of California, No. RE 46606, Exp. 06-30-18. The text inside the seal includes "REGISTERED PROFESSIONAL ENGINEER", "LAWRENCE R. FINLEY", "No. RE 46606", "Exp. 06-30-18", "CIVIL", and "STATE OF CALIFORNIA".

Larry Finley  
RE 46606

## VICINITY AERIAL MAP



Preliminary Geotechnical Investigation  
305 N. Mountain View Street  
Santa Ana, California

Work Order 288219

Plate No. 1

**STRATA - TECH, INC.**



SUMMARY OF BORING NO. B-1				
Date: 7/22/2019				
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples C B	Depth (Ft.)	Description
				Lt-Grayn, Sand, fn, silty dry
				Buff , clean fn-med sand
			5	Buff fn-crs Sand, clean,damp
				Sand, fn, trace of silt, wet, capillary fringe
			10	End of boring at 10 feet water @ 9' pinching @ 8.5
			15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California				Work Order 288219 Plate No.
<b>STRATA - TECH, INC.</b>				

SUMMARY OF BORING NO. B-3				
Date: 7/22/2019				
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples C B	Depth (Ft.)	Description
				Lt-Grayn, Sand, fn, silty dry
				Buff , clean fn-med sand
			5	End of boring at 5 feet no water, no caving
			10	
			15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California				Work Order 288219 Plate No.
STRATA - TECH, INC.				



SUMMARY OF BORING NO. B-3					
Date: 7/22/2019					
Dry Density (Pcf)	Moisture (% Dry Wt.)	Samples U B		Depth (Ft.)	Description
					Lt-Grayn, Sand, fn, silty dry
					Buff , clean fn-med sand
				5	End of boring at 5 feet no water, no caving
				10	
				15	
Geotechnical Engineering Investigation 305 N. Mountain View St Santa Ana, California					Work Order 288219
					Plate No.
<b>STRATA - TECH, INC.</b>					



## **APPENDIX A**

This appendix contains a description of the field investigation, laboratory testing procedures and results, site plan, and exploratory logs.

### **FIELD INVESTIGATION**

The field investigation was performed on July 22, 2019, consisting of the drilling exploratory borings by auger at the locations shown on the attached Site Plan, Plate 2. As drilling progressed, personnel from this office visually classified the soils encountered, and secured representative samples for laboratory testing.

Undisturbed samples for detailed testing in our laboratory were obtained by pushing or driving a sampling spoon into the material. A solid barrel-type spoon was used having an inside diameter of 2.5 inches with a tapered cutting tip at the lower end and a ball valve at the upper end. The barrel is lined with thin brass rings, each 1 inch in length. The spoon penetrated into the soil below the depth of pit approximately 6 to 18 inches. The central portion of this sample was retained for testing. All samples in their natural field condition were sealed in airtight containers and transported to the laboratory.

Descriptions of the soils encountered are presented on the attached Boring Logs. The data presented on these logs is a simplification of actual subsurface conditions encountered and applies only at the specific boring location and the date excavated. It is not warranted to be representative of subsurface conditions at other locations and times.

### **LABORATORY TESTING**

Field samples were examined in the laboratory and a testing program was then established to develop data for preliminary evaluation of geotechnical conditions.

Field moisture and dry densities were calculated for each undisturbed sample.

Maximum density-optimum moisture relationships were established for use in evaluation of in-situ conditions and for future use during grading operations.

Direct shear tests were performed on specimens at near saturation under various normal loads. The results of tests are based on 80 percent peak strength or ultimate strength, whichever is lower, and are attached.

Expansion tests were performed on typical specimens of natural soils in accordance with the procedures outlined in U.B.C. Standard 18-2

**TEST RESULTS**

**Maximum Density/Optimum Moisture (ASTM:D-1557)**

Boring	Depth in Feet	Maximum Density (pcf)	Optimum Moisture (%)
1	1 – 3	116.2	9.3

**In-Situ Dry Density/ Moisture**

Boring	Depth in Feet	Dry Density (pcf)	Moisture (%)
1	3	102.7	7.8
1	5	98.4	9.6

**Expansion Index (U.B.C. Standard 18-2)**

Boring	Depth in Feet	Expansion Index	Expansion Potential
1	1 – 3	0	Very Low
2	1 – 3	0	Very Low

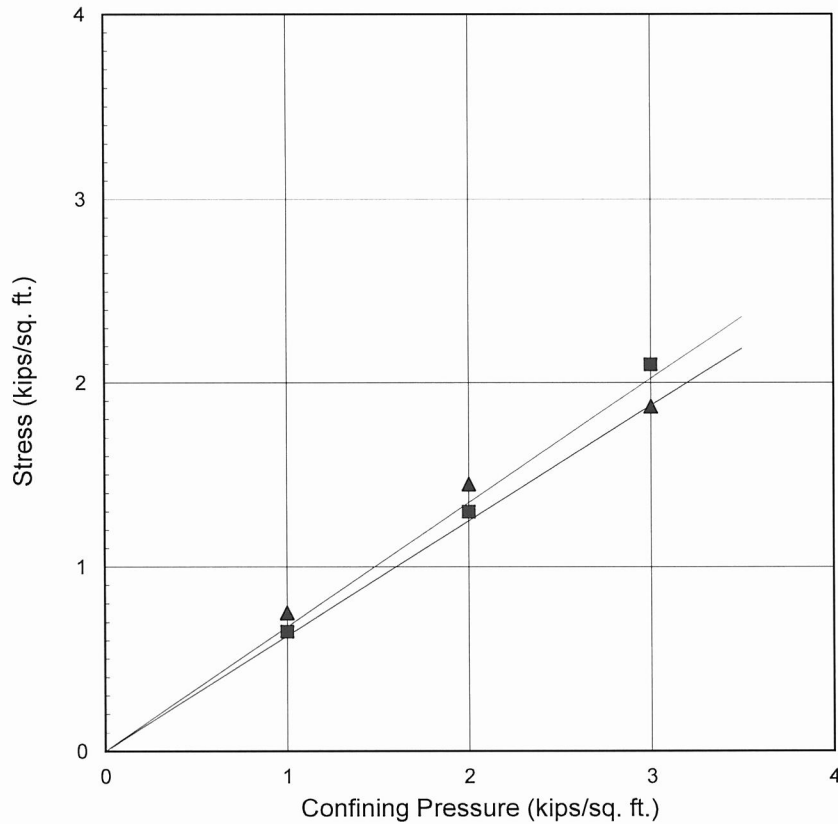
**Direct Shear (ASTM:D-3080)**

Boring	Depth in Feet	Cohesion (psf)	Angle of Internal Friction (degrees)
1	3	0	34
1	5	0	35

**Chemical Analysis**

Boring Number	Depth (feet)	Soluble Sulfate	Soluble Chlorides	Minimum Resistivity	PH
2	0-3	36	77	5128	7.2

## SHEAR TEST RESULTS



All samples were tested at saturated conditions.

Based on 80% peak strength or ultimate strength, whichever is lower

- ◆ Boring No. 1 @ 3 Feet  
Cohesion = 0 psf    Friction Angle = 34 degrees
- Boring No.2 @ 3 Feet  
Cohesion = 0 psf    Friction Angle = 32 degrees

Geotechnical Engineering Investigation  
305 N. Mountain View Street  
Santa Ana, California

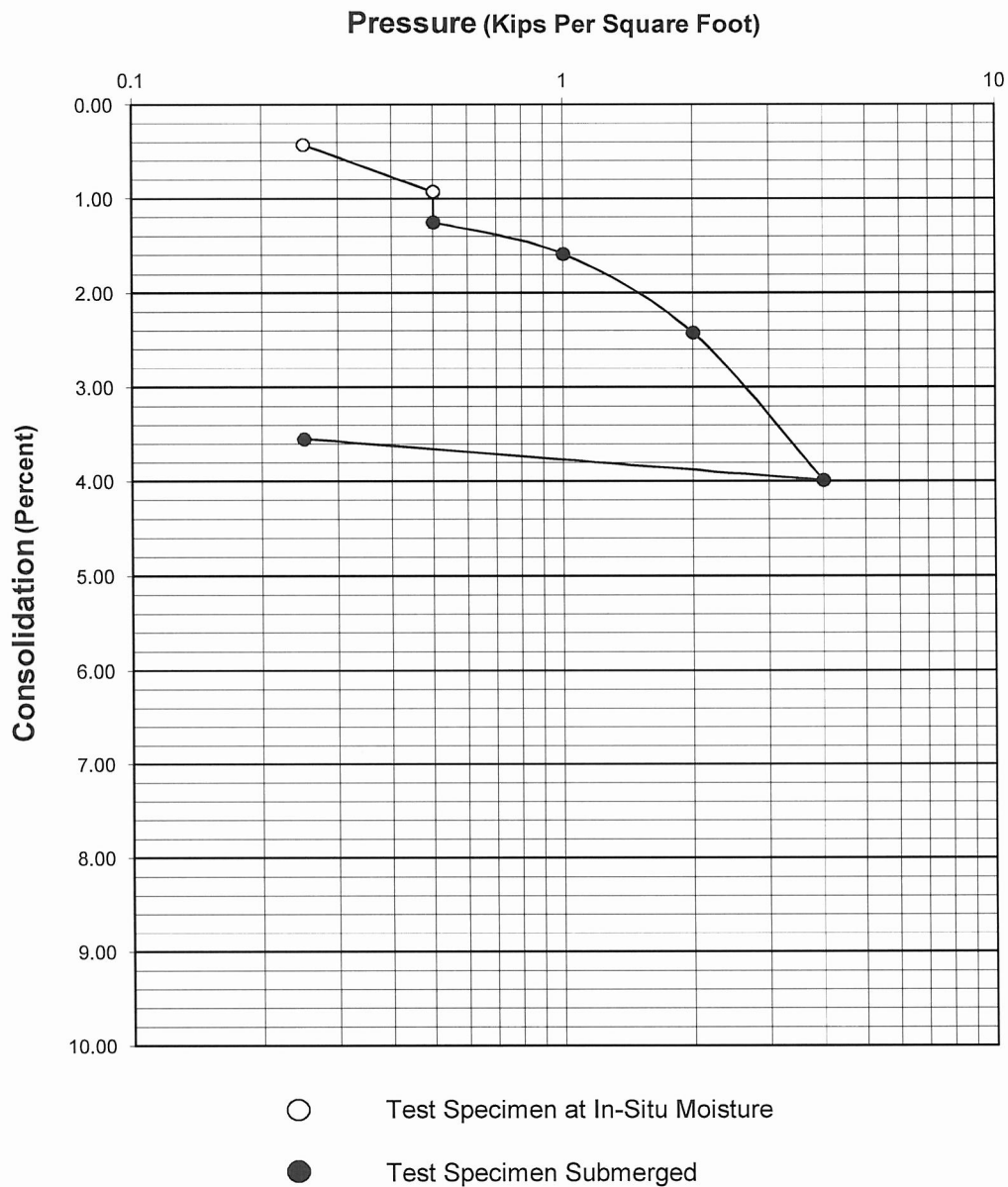
Work Order 288219

Plate No. 5

***STRATA - TECH, INC.***

# CONSOLIDATION TEST RESULTS

Boring No. 1 @ 3 Feet



Preliminary Geotechnical Investigation  
305 N. Mountain View Street  
Santa Ana, California

Work Order 288219

Plate No.

**STRATA - TECH, INC.**

## **SPECIFICATIONS FOR GRADING**

### ***SITE CLEARING***

All existing vegetation shall be stripped and hauled from the site.

### ***PREPARATION***

After the foundation for the fill has been cleared, plowed or scarified, it shall be disced or bladed until it is uniform and free from large clods, brought to a proper moisture content and compacted to not less than 90 percent of the maximum dry density in accordance with ASTM:D-1557 (5 layers - 25 blows per layer; 10 lb. hammer dropped 18"; 4" diameter mold).

### ***MATERIALS***

On-site materials may be used for fill, or fill materials shall consist of materials approved by the Soils Engineer and may be obtained from the excavation of banks, borrow pits or any other approved source. The materials used should be free of vegetable matter and other deleterious substances and shall not contain rocks or lumps greater than 8 inches in maximum dimension.

### ***PLACING, SPREADING, AND COMPACTING FILL MATERIALS***

Where natural slopes exceed five horizontal to one vertical, the exposed bedrock shall be benched prior to placing fill.

The selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to ensure uniformity of material and moisture of each layer.

Where moisture of the fill material is below the limits specified by the Soils Engineer, water shall be added until the moisture content is as required to ensure thorough bonding and thorough compaction.

Where moisture content of the fill material is above the limits specified by the Soils Engineer, the fill materials shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to not less than 90 percent of the maximum dry density in accordance with ASTM:D-1557 (5 layers -25 blows per layer; 10 lbs. hammer dropped 18 inches; 4" diameter mold) or other density tests which will attain equivalent results.

***SPECIFICATIONS FOR GRADING***

***PAGE 2***

Compaction shall be by sheepfoot roller, multi-wheel pneumatic tire roller or other types of acceptable rollers.

Rollers shall be of such design that they will be able to compact the fill to the specified density. Rolling shall be accomplished while the fill material is at the specified moisture content. Rolling of each layer shall be continuous over the entire area and the roller shall make sufficient trips to ensure that the desired density has been obtained. The final surface of the lot areas to receive slabs on grade should be rolled to a dense, smooth surface.

The outside of all fill slopes shall be compacted by means of sheepfoot rollers or other suitable equipment. Compaction operations shall be continued until the outer 9 inches of the slope is at least 90 percent compacted. Compacting of the slopes may be progressively in increments of 3 feet to 5 feet of fill height as the fill is brought to grade, or after the fill is brought to its total height.

Field density tests shall be made by the Soils Engineer of the compaction of each layer of fill. Density tests shall be made at intervals not to exceed 2 feet of fill height provided all layers are tested. Where the sheepfoot rollers are used, the soil may be disturbed to a depth of several inches and density readings shall be taken in the compacted material below the disturbed surface. When these readings indicate that the density of any layer of fill or portion there is below the required 90 percent density, the particular layer or portion shall be reworked until the required density has been obtained.

The grading specifications should be a part of the project specifications.

The Soil Engineer shall review the grading plans prior to grading.

***INSPECTION***

The Soil Engineer shall provide continuous supervision of the site clearing and grading operation so that he can verify the grading was done in accordance with the accepted plans and specifications.

***SEASONAL LIMITATIONS***

No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, fill operations shall not be resumed until the field tests by the Soils Engineer indicate the moisture content and density of the fill are as previously specified.

***EXPANSIVE SOIL CONDITIONS***

Whenever expansive soil conditions are encountered, the moisture content of the fill or recompacted soil shall be as recommended in the expansive soil recommendations included herewith.

# **Attachment F**

## **Conditions of Approval**

TO BE INCLUDED IN FINAL WQMP



# Appendix F:

## Noise



March 2, 2020

Ms. Lori Trottier, Environmental Project Manager  
INFRASTRUCTURE ENGINEERING CORPORATION  
300 Spectrum Center Drive, Suite 400  
Irvine, California 92618

**Re: 301 North Mountain View Street Noise Technical Memorandum**  
19237

Dear Ms. Trottier:

**INTRODUCTION**

Ganddini Group, Inc. is pleased to provide this noise technical memorandum for the proposed 301 Mountain View Street project. The project site is located at 301 and 305 Mountain View Avenue in the City of Santa Ana. A vicinity map showing the project location is provided on Figure 1.

Although this is a technical letter, every effort has been made to write the report clearly and concisely. A list of acronyms and a glossary are provided in Appendix A and Appendix B of this report, respectively, to assist the reader with technical terms related to acoustical analysis.

**PROJECT DESCRIPTION**

The proposed project involves demolishing two existing single-family residential dwelling units and development of eight (8) condominium dwelling units. The proposed project site plan is illustrated on Figure 2.

The project also involves a General Plan Amendment and Zone Change for the development site and adjacent properties to the north and south between 5th Street and 1st Street to bring the subject properties into compliance. The existing land use designations consist of approximately 7.2 acres of Low-Medium Density Residential (LMR-11) and 1.6 acres of General Commercial (GC). The proposed land use designations consist of approximately 6.6 acres of Medium Density Residential (MR-15) and 2.1 acres of Low Density Residential (LR-7).

**APPLICABLE STANDARDS**

**CITY OF SANTA ANA MUNICIPAL CODE<sup>1</sup>**

The City of Santa Ana Municipal Code Article VI Noise Control establishes daytime and nighttime permissible sound limits at all residentially zoned properties in the City.

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<sup>1</sup> City of Santa Ana Municipal Code. 2019.

#### Section 18-312- Exterior Noise Standards.

- (a) The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone:

Exterior Noise Standards		
Noise Zone	Noise Level	Time Period
1	55 dB(A)	7:00 AM - 10:00 PM
	50 dB(A)	10:00 PM - 7:00 AM

In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) dB (A).

- (b) It shall be unlawful for any person at any location within the City of Santa Ana to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:
- 1) The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or
  - 2) The noise standard plus five (5) dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
  - 3) The noise standard plus ten (10) dB(A) for a cumulative period of more than five (5) minutes in any hour; or
  - 4) The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one minute in any hour; or
  - 5) The noise standard plus twenty (20) dB(A) for any period of time.
- (c) In the event the ambient noise level exceeds any of the first four (4) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

#### Section 18-313- Interior Noise Standards.

- (a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all residential property within a designated noise zone:

Interior Noise Standards		
Noise Zone	Noise Level	Time Period
1	55 dB(A)	7:00 AM - 10:00 PM
	45 dB(A)	10:00 PM - 7:00 AM

In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) dB(A).

- (b) It shall be unlawful for any person at any location within the City of Santa Ana to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured within any other dwelling unit on any residential property, to exceed:

- 1) The interior noise standard for a cumulative period of more than five (5) minutes in any hour; or
  - 2) The interior noise standard plus five (5) dB(A) for a cumulative period of more than one minute in any hour; or
  - 3) The interior noise standard plus ten (10) dB(A) for any period of time.
- (c) In the event the ambient noise level exceeds either of the first two (2) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

#### **Section 18-314- Special Provisions.**

The following activities shall be exempted from the provisions of this article:

- (e) Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 PM and 7:00 AM on weekdays, including Saturday, or any time on Sunday or a federal holiday.

#### **FEDERAL TRANSIT ADMINISTRATION (FTA)**

The City of Santa Ana has not adopted a numerical threshold that identifies what a substantial increase would be for construction related activities. For purposes of this analysis, the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment (2006) criteria will be used to establish significance thresholds. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA  $L_{eq}$  averaged over an 8-hour period  $L_{eq}$  (8-hr); and the nighttime noise threshold is 70 dBA  $L_{eq}$  (8-hr). For commercial uses, the daytime and nighttime noise threshold is 85 dBA  $L_{eq}$  (8-hr). In compliance with the City's Code, it is assumed that construction would not occur during the noise-sensitive nighttime hours.

#### **EXISTING LAND USES AND SENSITIVE RECEPTORS**

The project site is bordered by residential uses to the north, south, and east and Mountain View Street to the west.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multi-family residential, including transient lodging, motels and hotel uses make up the majority of these areas.

Sensitive receptors that may be affected by project generated noise include the multi-family attached residential dwelling units located adjacent to the north and south, the mobile home park located adjacent to the east, and the single-family detached residential dwelling units located approximately 60 feet west of the project site on the other side of Mountain View Street.

#### **ANALYTICAL METHODOLOGY AND MODEL PARAMETERS**

Construction noise associated with the proposed project was calculated at the sensitive receptor locations, utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the project site. The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the

CalEEMod modeling in the Air Quality, Global Climate Change, and Energy Technical Memorandum prepared for the proposed project (Ganddini Group, Inc., 2020). For construction noise purposes, the distance measured from the project site to sensitive receptors was assumed to be the acoustical center of the project site to the property line of residential properties with existing residential buildings. Construction noise worksheets are provided in Appendix C.

## **DISCUSSION AND RECOMMENDATIONS**

### **CONSTRUCTION NOISE LEVEL PROJECTIONS**

The residential uses surrounding the project site may be affected by short-term noise impacts associated with construction noise. Construction noise will vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work.

The construction phases for the proposed project are anticipated to include: demolition, site preparation, grading, building construction, paving and architectural coating. A summary of noise level data for a variety of construction equipment compiled by the U.S. Department of Transportation is presented in Table 1. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings.

Construction noise associated with the proposed project was calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the proposed construction activity. Construction noise levels were calculated for each phase. Anticipated noise levels during each construction phase are presented in Table 2. Worksheets for each phase are included as Appendix C.

Construction noise sources are regulated within Section 18-314 of the City of Santa Ana's Municipal Code. Per Municipal Code Section 18-314, construction activities are prohibited between the hours of 8:00 PM and 7:00 AM on weekdays, including Saturday, or any time on Sunday or a federal holiday. In compliance with the County Code, it is assumed that construction would not occur during the noise-sensitive nighttime hours.

Modeled unmitigated construction noise levels reach up to 88 dBA  $L_{eq}$  at the adjacent residential property line to the north of the project site, 79.3 dBA  $L_{eq}$  at the adjacent residential property line to the east of the project site, 88 dBA  $L_{eq}$  at the adjacent residential property line to the south of the project site, and 70.8 dBA  $L_{eq}$  at the residential property line to the west of the project site. Provision of mufflers or enclosures or acoustical tents (as appropriate) that provide at least 8 dB of noise reduction could reduce the highest construction noise level to approximately 80.0 dBA  $L_{eq}$ . Mitigation to ensure that project construction does not exceed the FTA threshold of 80 dB at nearby residential land uses is presented below along with other measures to minimize construction noise. Impacts would be less than significant with mitigation.

### **CONSTRUCTION NOISE REDUCTION MEASURES**

In addition to adherence to the City of Santa Ana's Municipal Code which limits the construction hours of operation, the following measures are recommended to reduce construction noise and vibrations, emanating from the proposed project:

1. Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards. Mufflers should achieve a reduction of at least 8 dB.
2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.
3. Equipment shall be shut off and not left to idle when not in use.
4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.
5. Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.
6. The project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the project site during construction.
7. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

## CONCLUSIONS

The noise impacts from the proposed 301 Mountain View Street project are anticipated to be compliant with the City's noise ordinance during construction with the implementation of the identified and required noise measures.

It has been a pleasure to assist you with this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100.

Respectfully submitted,

Roma Stromberg, M.S./INCE  
Senior Noise Analyst

**Table 1 (1 of 2)**  
**CA/T Equipment Noise Emissions and Acoustical Usage Factor Database**

Equipment Description	Impact Device?	Acoustical use Factor (%)	50ft (dBA,	Measured	Data Samples
All Other Equipment > 5 HP	No	50	85	-N/A-	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-N/A-	0
Blasting	Yes	-N/A-	94	-N/A-	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-N/A-	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Forklift <sup>2,3</sup>	No	50	n/a	61	n/a
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-N/A-	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-N/A-	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	50	85	77	9
Paving Equipment	No	50	85	77	9
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17



**Table 1 (2 of 2)**  
**CA/T Equipment Noise Emissions and Acoustical Usage Factor Database**

Equipment Description	Impact Device?	Acoustical use Factor (%)	50ft (dBA,	Measured	Data Samples
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-N/A-	0
Tractor	No	40	84	-N/A-	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

Notes:

(1) Source: FHWA Roadway Construction Noise Model User's Guide January 2006.

(2) Warehouse & Forklift Noise Exposure - NoiseTesting.info Carl Stautins, November 4, 2014 <http://www.noisetesting.info/blog/carl-strautins/page-3/>

(3) Data provided Leq as measured at the operator. Sound Level at 50 feet is calculated using Inverse Square Law.

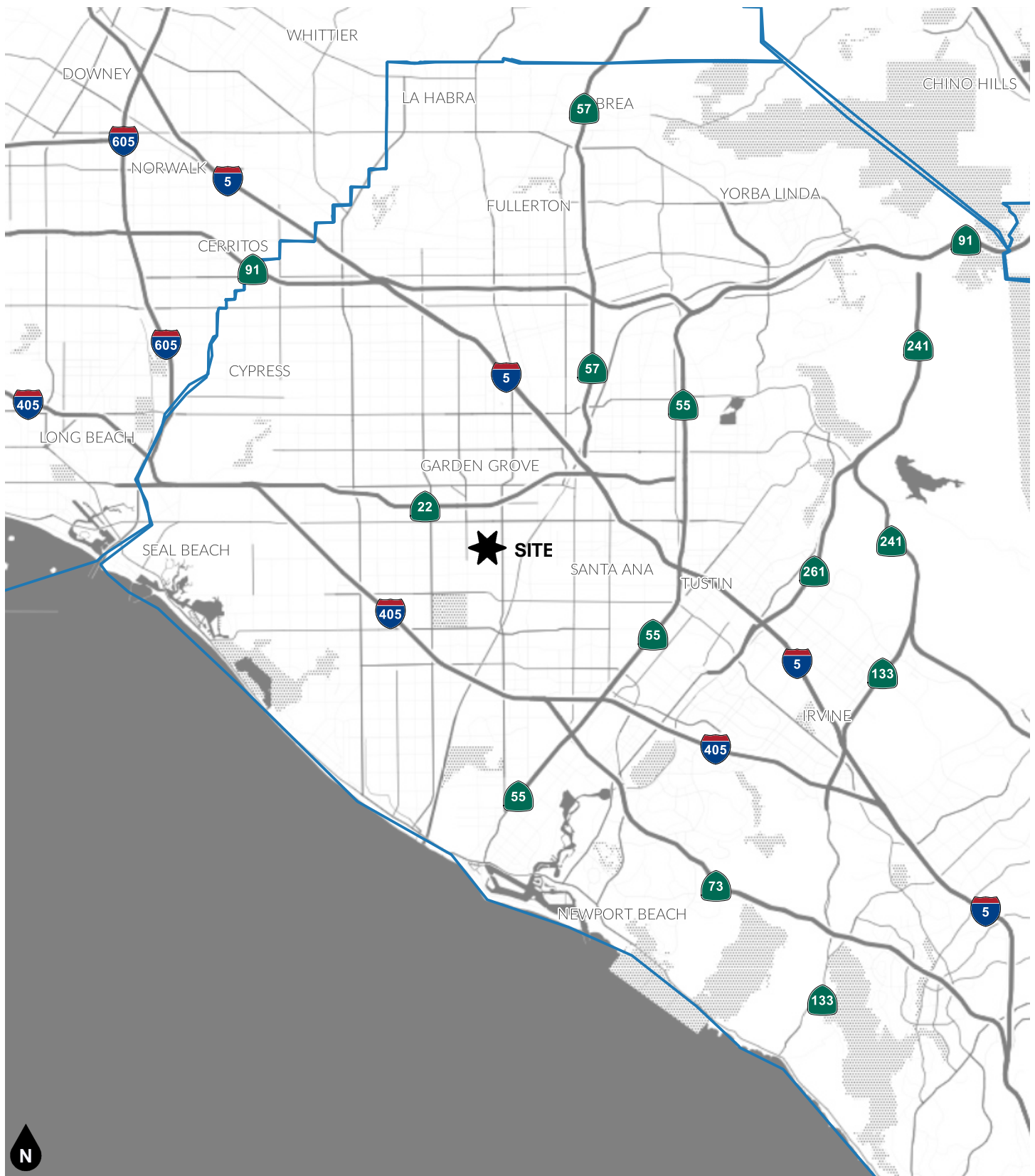
**Table 2**  
**Construction Noise Levels (L<sub>eq</sub>)**

Receptor Location	Phase	Unmitigated Construction Noise Levels (Leq)	Reduction to Meet 80 dBA Standard <sup>1</sup> (dB)	Mitigated Construction Noise Levels (Leq)
North	Demolition	82.5	2.5	80.0
East		73.8	0	73.8
South		82.5	2.5	80.0
West		70.8	0	70.8
North	Site Preparation	75.2	0	75.2
East		66.5	0	66.5
South		75.2	0	75.2
West		63.6	0	63.6
North	Grading	82.5	2.5	80.0
East		73.8	0	73.8
South		82.5	2.5	80.0
West		70.8	0	70.8
North	Building Construction	79.8	0	79.8
East		71.0	0	71.0
South		79.8	0	79.8
West		68.1	0	68.1
North	Paving	88.0	8	80.0
East		79.3	0	79.3
South		88.0	8	80.0
West		76.4	0	76.4
North	Architectural Coating	75.2	0	75.2
East		66.5	0	66.5
South		75.2	0	75.2
West		63.6	0	63.6

Notes:

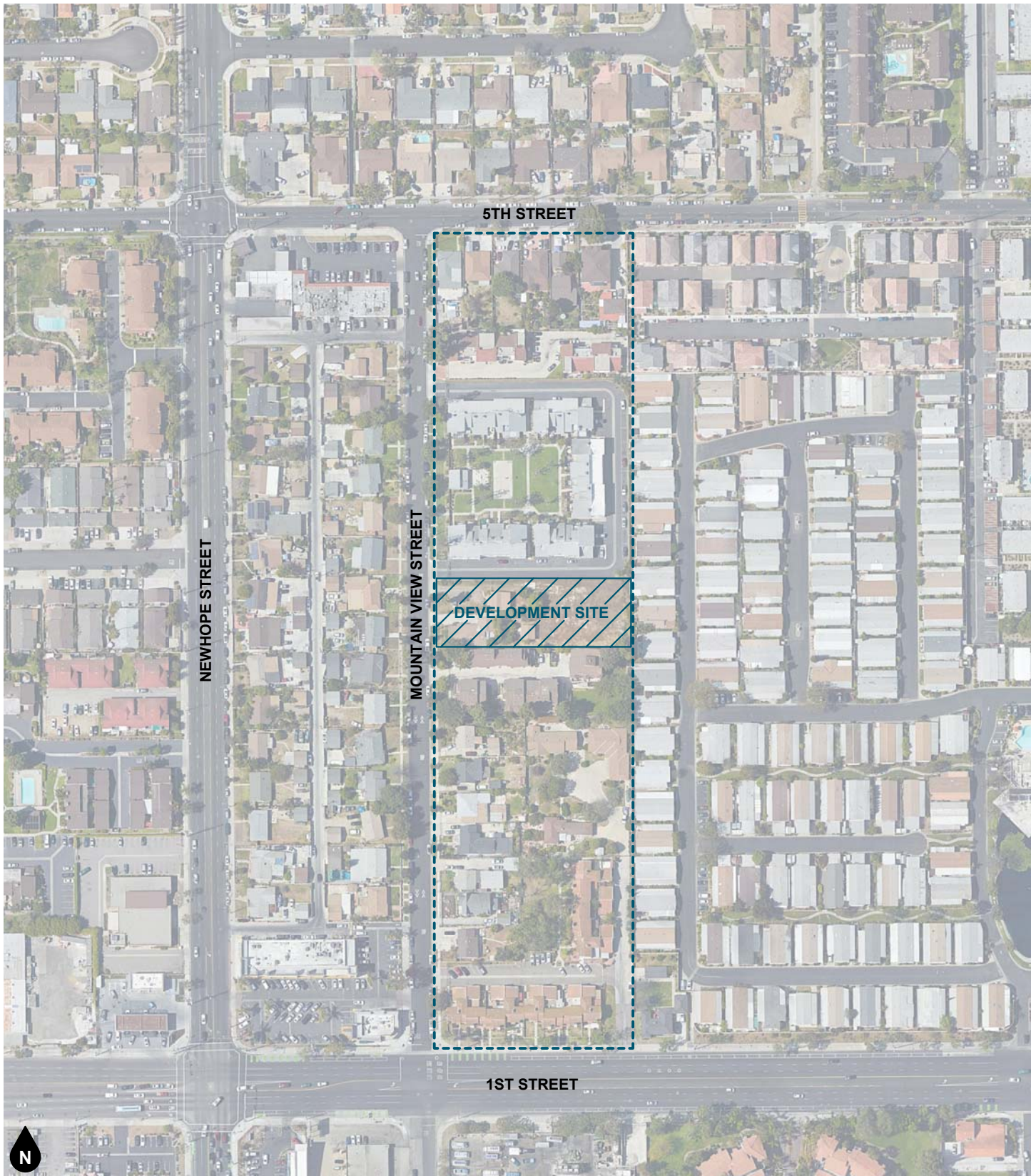
(1) This reduction can be verified by measuring on-site equipment or by special ordering mufflers to meet reduction requirement, or by providing sheilding/acoustic tent that provides a 20 dB reduction. See Appendix C.

(2) Construction noise worksheets are provided in Appendix C.



**Figure 1**  
**Regional Vicinity**

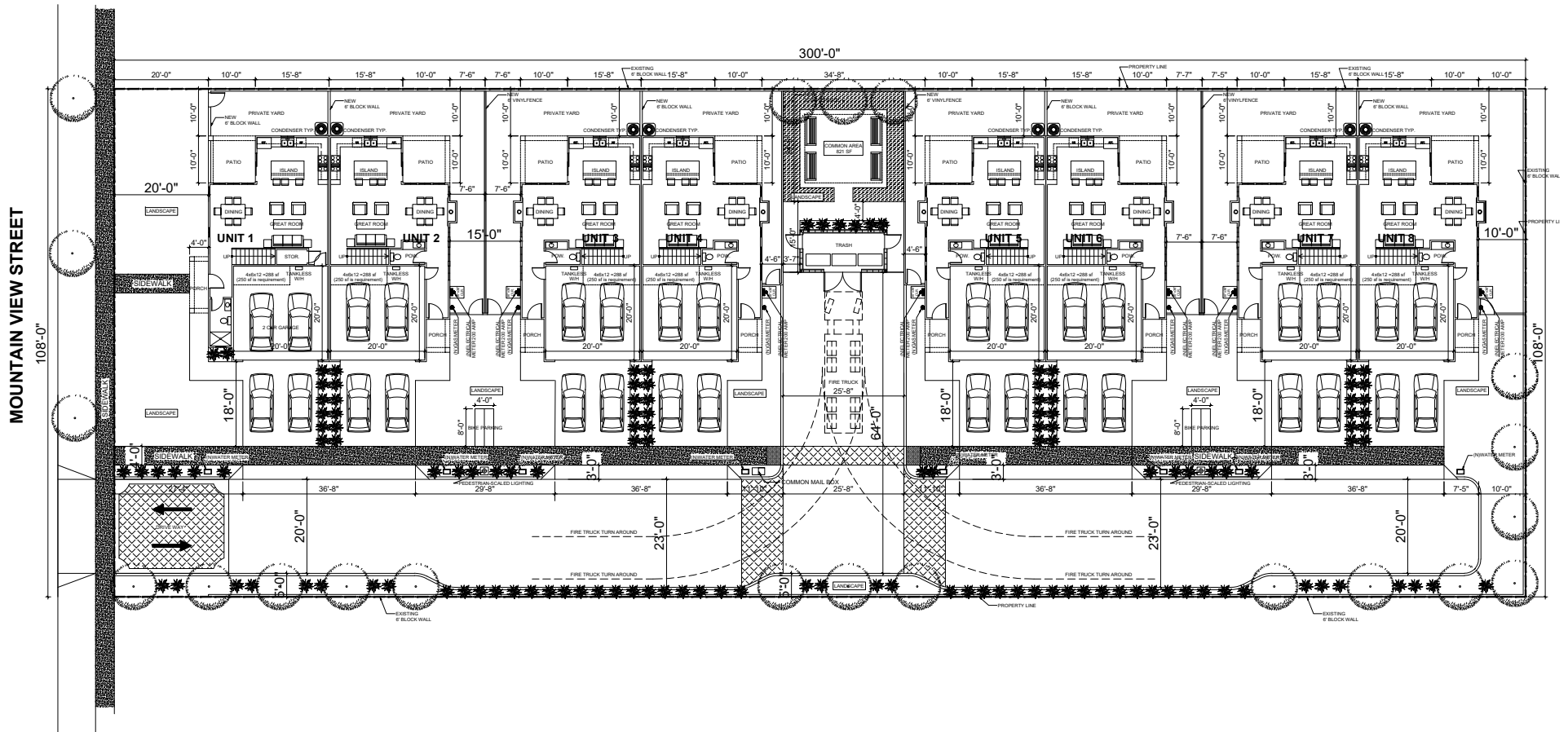




Legend

----- General Plan Amendment Boundary

**Figure 2**  
**Project Location Map**



**Figure 3**  
**Proposed Site Plan**

Source: ANHA Design Studio

## **APPENDIX A**

### **LIST OF ACRONYMS**

## TERMS

ADT  
ANSI  
APN  
Caltrans  
Calveno  
CEQA  
CFR  
CNEL  
D/E/N  
dB  
dBA or dB(A)  
EIR  
EPA  
FAA  
FHWA  
FTA  
Hz  
INCE  
L<sub>02</sub>, L<sub>08</sub>, L<sub>50</sub>, L<sub>90</sub>  
  
DNL  
Leq(x)  
L<sub>max</sub>  
L<sub>min</sub>  
LOS C  
MPH  
NEPA  
OPR  
Peak Hour L<sub>eq</sub>  
PPV  
RCNM  
RMS  
SEL  
SPL  
STC  
VdB

## DEFINITIONS

Average Daily Traffic volume  
American National Standard Institute  
Assessor's Parcel Number  
California Department of Transportation  
California Vehicle Noise  
California Environmental Quality Act  
Code of Federal Regulations  
Community Noise Equivalent Level  
Day/Evening/Night  
Decibel  
Decibel "A-Weighted"  
Environmental Impact Report  
Environmental Protection Agency  
Federal Aviation Administration  
Federal Highway Administration  
Federal Transit Administration  
Hertz  
Institute of Noise Control Engineering  
A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period  
Day-Night Average Noise Level  
Equivalent Noise Level for "x" period of Time  
Maximum Level of Noise (measured using a sound level meter)  
Minimum Level of Noise (measured using a sound level meter)  
Level of Service C  
Miles Per Hour  
National Environmental Policy Act  
California Governor's Office of Planning and Research  
Peak Hour Equivalent Sound Level  
Peak Particle Velocity  
Road Construction Noise Model  
Root Mean Square  
Single Event Level or Sound Exposure Level  
Sound Pressure Level  
Sound Transmission Class  
Vibration Velocity Decibels



## **APPENDIX B**

### **DEFINITIONS OF ACOUSTICAL TERMS**

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, $L_{eq}$	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
$L_{02}$ , $L_{08}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
$L_{max}$ , $L_{min}$	$L_{max}$ is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. $L_{min}$ is the minimum level.
Offensive/ Offending/ Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

## **APPENDIX C**

### **CONSTRUCTION NOISE MODELING**

Receptor -Residential adjacent to North & South

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1,2</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Receptor Item Leq, dBA	Required Mitigation	Mitigated Noise Level
<b>Demolition</b>								
Concrete/Industrial Saws	1	76	55	20	0.20	68.2	Enclosure or Acoustic Tent (10 dB Reduction)	58.2
Tractors/Loaders/Backhoes	2	80	55	40	0.80	78.2	Muffler (10 dB Reduction)	68.2
Rubber Tired Dozers	1	85	55	40	0.40	80.2	Muffler (10 dB Reduction)	70.2
						82.5		72.5
<b>Site Preparation</b>								
Tractors/Loaders/Backhoes	1	80	55	40	0.40	75.2	Muffler (10 dB Reduction)	65.2
						75.2		65.2
<b>Grading</b>								
Concrete/Industrial Saws	1	76	55	20	0.20	68.2	Enclosure or Acoustic Tent (10 dB Reduction)	58.2
Rubber Tired Dozers	1	85	55	40	0.40	80.2	Muffler (10 dB Reduction)	70.2
Tractors/Loaders/Backhoes	2	80	55	40	0.80	78.2	Muffler (10 dB Reduction)	68.2
						82.5		72.5
<b>Building Construction</b>								
Cranes	1	83	55	16	0.16	74.2	Muffler (10 dB Reduction)	64.2
Forklifts	2	64	55	50	1.00	63.2	n/a	52.1
Tractors/Loaders/Backhoes	2	80	55	40	0.80	78.2	Muffler (10 dB Reduction)	68.2
						79.8		69.7
<b>Paving</b>								
Cement and Mortar Mixers	4	85	55	40	1.60	86.2	Muffler (10 dB Reduction)	76.2
Pavers	1	85	55	50	0.50	81.2	Muffler (10 dB Reduction)	71.2
Tractors/Loaders/Backhoes	1	80	55	40	0.40	75.2	Muffler (10 dB Reduction)	65.2
Rollers	1	85	55	20	0.20	77.2	Muffler (10 dB Reduction)	67.2
						88.0		78.0
<b>Architectural Coating</b>								
Air Compressors	1	80	55	40	0.40	75.2	Enclosure or Acoustic Tent (10 dB Reduction)	65.2
						75.2		65.2

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA RoadwayConstruction Noise Model User's Guide (January 2006)

(2) Source: <http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels>

(8) Source: [https://www.cat.com/en\\_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html](https://www.cat.com/en_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html)

Receptor -Residential adjacent to East

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1,2</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Receptor Item Leq, dBA	Required Mitigation	Mitigated Noise Level
<b>Demolition</b>								
Concrete/Industrial Saws	1	76	150	20	0.20	59.5	Enclosure or Acoustic Tent (10 dB Reduction)	49.5
Tractors/Loaders/Backhoes	2	80	150	40	0.80	69.5	Muffler (10 dB Reduction)	59.5
Rubber Tired Dozers	1	85	150	40	0.40	71.5	Muffler (10 dB Reduction)	61.5
						73.8		63.8
<b>Site Preparation</b>								
Tractors/Loaders/Backhoes	1	80	150	40	0.40	66.5	Muffler (10 dB Reduction)	56.5
						66.5		56.5
<b>Grading</b>								
Concrete/Industrial Saws	1	76	150	20	0.20	59.5	Enclosure or Acoustic Tent (10 dB Reduction)	49.5
Rubber Tired Dozers	1	85	150	40	0.40	71.5	Muffler (10 dB Reduction)	61.5
Tractors/Loaders/Backhoes	2	80	150	40	0.80	69.5	Muffler (10 dB Reduction)	59.5
						73.8		63.8
<b>Building Construction</b>								
Cranes	1	83	150	16	0.16	65.5	Muffler (10 dB Reduction)	55.5
Forklifts	2	64	150	50	1.00	54.5	n/a	52.1
Tractors/Loaders/Backhoes	2	80	150	40	0.80	69.5	Muffler (10 dB Reduction)	59.5
						71.0		61.5
<b>Paving</b>								
Cement and Mortar Mixers	4	85	150	40	1.60	77.5	Muffler (10 dB Reduction)	67.5
Pavers	1	85	150	50	0.50	72.4	Muffler (10 dB Reduction)	62.4
Tractors/Loaders/Backhoes	1	80	150	40	0.40	66.5	Muffler (10 dB Reduction)	56.5
Rollers	1	85	150	20	0.20	68.5	Muffler (10 dB Reduction)	58.5
						79.3		69.3
<b>Architectural Coating</b>								
Air Compressors	1	80	150	40	0.40	66.5	Enclosure or Acoustic Tent (10 dB Reduction)	56.5
						66.5		56.5

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA RoadwayConstruction Noise Model User's Guide (January 2006)

(2) Source: <http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels>

(8) Source: [https://www.cat.com/en\\_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html](https://www.cat.com/en_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html)

## Receptor -Residential to West

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1,2</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Receptor Item Leq, dBA	Required Mitigation	Mitigated Noise Level
<b>Demolition</b>								
Concrete/Industrial Saws	1	76	210	20	0.20	56.5	Enclosure or Acoustic Tent (10 dB Reduction)	46.5
Tractors/Loaders/Backhoes	2	80	210	40	0.80	66.6	Muffler (10 dB Reduction)	56.6
Rubber Tired Dozers	1	85	210	40	0.40	68.6	Muffler (10 dB Reduction)	58.6
						70.8		60.8
<b>Site Preparation</b>								
Tractors/Loaders/Backhoes	1	80	210	40	0.40	63.6	Muffler (10 dB Reduction)	53.6
						63.6		53.6
<b>Grading</b>								
Concrete/Industrial Saws	1	76	210	20	0.20	56.5	Enclosure or Acoustic Tent (10 dB Reduction)	46.5
Rubber Tired Dozers	1	85	210	40	0.40	68.6	Muffler (10 dB Reduction)	58.6
Tractors/Loaders/Backhoes	2	80	210	40	0.80	66.6	Muffler (10 dB Reduction)	56.6
						70.8		60.8
<b>Building Construction</b>								
Cranes	1	83	210	16	0.16	62.6	Muffler (10 dB Reduction)	52.6
Forklifts	2	64	210	50	1.00	51.5	n/a	52.1
Tractors/Loaders/Backhoes	2	80	210	40	0.80	66.6	Muffler (10 dB Reduction)	56.6
						68.1		59.0
<b>Paving</b>								
Cement and Mortar Mixers	4	85	210	40	1.60	74.6	Muffler (10 dB Reduction)	64.6
Pavers	1	85	210	50	0.50	69.5	Muffler (10 dB Reduction)	59.5
Tractors/Loaders/Backhoes	1	80	210	40	0.40	63.6	Muffler (10 dB Reduction)	53.6
Rollers	1	85	210	20	0.20	65.5	Muffler (10 dB Reduction)	55.5
						76.4		66.4
<b>Architectural Coating</b>								
Air Compressors	1	80	210	40	0.40	63.6	Enclosure or Acoustic Tent (10 dB Reduction)	53.6
						63.6		53.6

## Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA RoadwayConstruction Noise Model User's Guide (January 2006)

(2) Source: <http://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels>

(8) Source: [https://www.cat.com/en\\_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html](https://www.cat.com/en_US/products/new/equipment/off-highway-trucks/off-highway-trucks/18549188.html)

# Appendix G:

## Traffic





February 21, 2020

Ms. Lori Trottier, Environmental Project Manager  
INFRASTRUCTURE ENGINEERING CORPORATION  
300 Spectrum Center Drive, Suite 400  
Irvine, CA 92618

**RE: 301 North Mountain View Street Trip Generation Analysis**  
19237

Dear Ms. Trottier:

**INTRODUCTION**

Ganddini Group, Inc. is pleased to provide this trip generation analysis for the proposed 301 North Mountain View Street project in the City of Santa Ana. The purpose of this trip generation analysis is to document the forecast trip generation for the proposed development as well as a proposed General Plan Amendment and Zone Change for the development site and adjacent properties.

**PROJECT DESCRIPTION**

The 32,400 square foot proposed development site is located at 301 and 305 Mountain View Street in the City of Santa Ana, California. The regional vicinity and project location are shown on Figures 1 and 2.

The proposed project involves demolishing two existing single-family residential dwelling units and development of eight (8) condominium dwelling units. Figure 3 shows the proposed project site plan.

The project also involves a General Plan Amendment and Zone Change for the development site and adjacent properties to the north and south between 5th Street and 1st Street to bring the subject properties into compliance. The existing land use designations consist of approximately 7.2 acres of Low-Medium Density Residential (LMR-11) and 1.6 acres of General Commercial (GC). The proposed land use designations consist of approximately 6.6 acres of Medium Density Residential (MR-15) and 2.1 acres of Low Density Residential (LR-7).

**PROPOSED DEVELOPMENT TRIP GENERATION**

Table 1 shows the trip generation forecast for the proposed development based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) [Trip Generation Manual](#) (10th Edition, 2017). Daily, AM peak hour, and PM peak hour rates and directional distributions for ITE Land Use Code 220 - Multifamily Housing (Low-Rise) were used for the proposed development and ITE Land Use Code 210 - Single-Family Detached Housing were used for the existing site land use. The number of trips forecast to be generated by the existing and proposed uses is determined by multiplying the trip generation rates by the land use quantity.

As shown in Table 1, the existing land uses are estimated to generate approximately 19 daily trips, including 1 trip during the AM peak hour and 2 trips during the PM peak hour. The proposed development is forecast to generate approximately 59 daily trips, including 4 trips during the AM peak hour and 6 trips during the PM peak hour. Therefore, the proposed project is forecast to generate a total of 40 net new daily trips, including 3 net new trips during the AM peak hour and 4 net new trips during the PM peak hour.

## GENERAL PLAN AMENDMENT TRIP GENERATION COMPARISON

Table 2 calculates the potential buildout for existing and proposed land use designations within the General Plan Amendment boundary. As shown in Table 2, the existing General Plan land use designations allow for a maximum buildout of 79 low-medium density residential dwelling units and up to 67,605 square feet of commercial land uses. The proposed General Plan land use designations allow for a maximum buildout of 99 medium density residential dwelling units and 15 low density residential dwelling units.

Table 3 shows a trip generation comparison between maximum buildout of the existing and proposed General Plan land use designations. ITE trip generation rates for Land Use Code 210 - Single-Family Detached Housing were used for the Low Density and Medium-Low Density Residential and rates for Land Use Code 220 - Multifamily Housing (Low-Rise) were used for the Medium Density Residential land uses. The ITE trip generation rates for Land Use Code 820 - Shopping Center were used for the General Commercial land use.

As shown in Table 3, the proposed General Plan Amendment is forecast to result in a net change of 2,433 fewer daily trips, including 66 fewer daily trips during the AM peak hour and 248 fewer daily trips during the PM peak hour.

## PROJECT SCREENING

In accordance with Section 2.1 of the City of Santa Ana Traffic Impact Study Guidelines (September 2019), projects that generate less than 110 net daily trips can be screened out from a Vehicle Miles Traveled (VMT) assessment. As noted in the Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018), CEQA Guidelines, § 15301, subdivision (e)(2) provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

## CONCLUSION

The proposed development is forecast to generate fewer than 110 net daily trips. Therefore, the proposed development can be considered to result in no significant traffic/transportation impacts under CEQA.

Buildout of the proposed General Plan land use designations is forecast to result in approximately 2,433 fewer daily trips compared to buildout of the existing General Plan land use designations. Therefore, the proposed General Plan Amendment can be considered to result in no significant traffic/transportation impacts under CEQA.

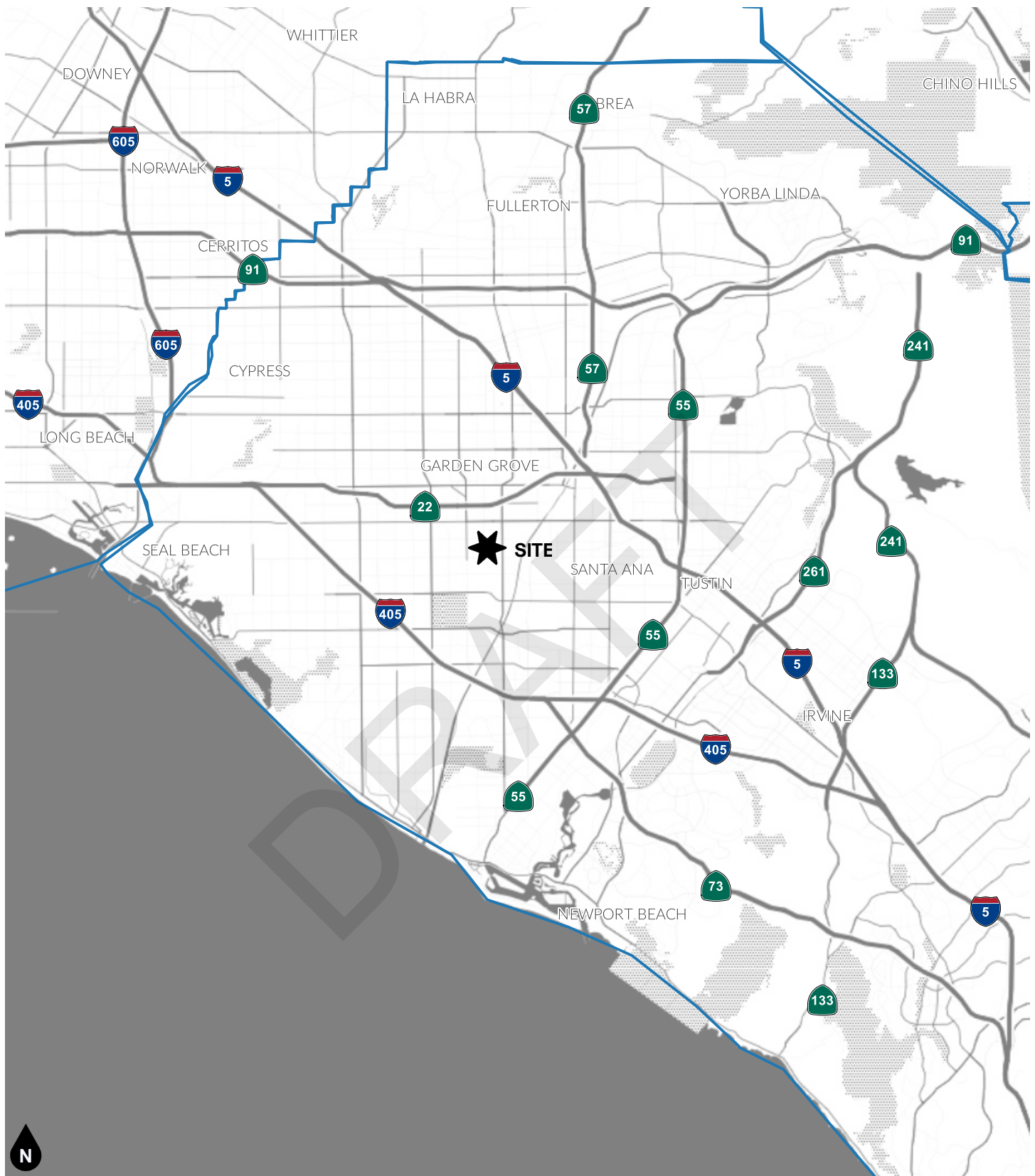
Ms. Lori Trottier, Environmental Project Manager  
INFRASTRUCTURE ENGINEERING CORPORATION  
February 21, 2020

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to contact us at (714) 795-3100.

Sincerely,

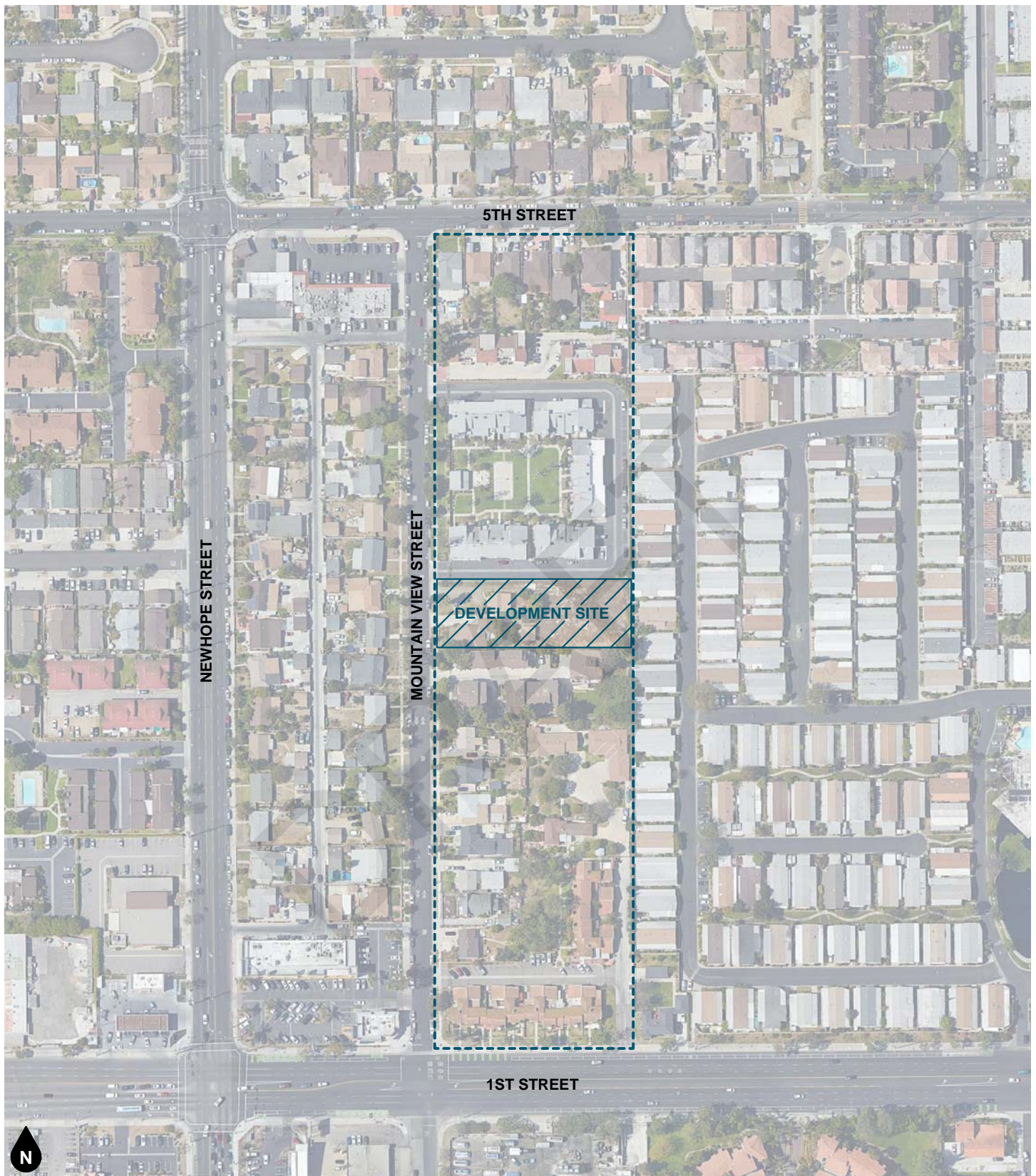
Giancarlo Ganddini, TE, PTP  
Principal





**Figure 1**  
**Regional Vicinity**

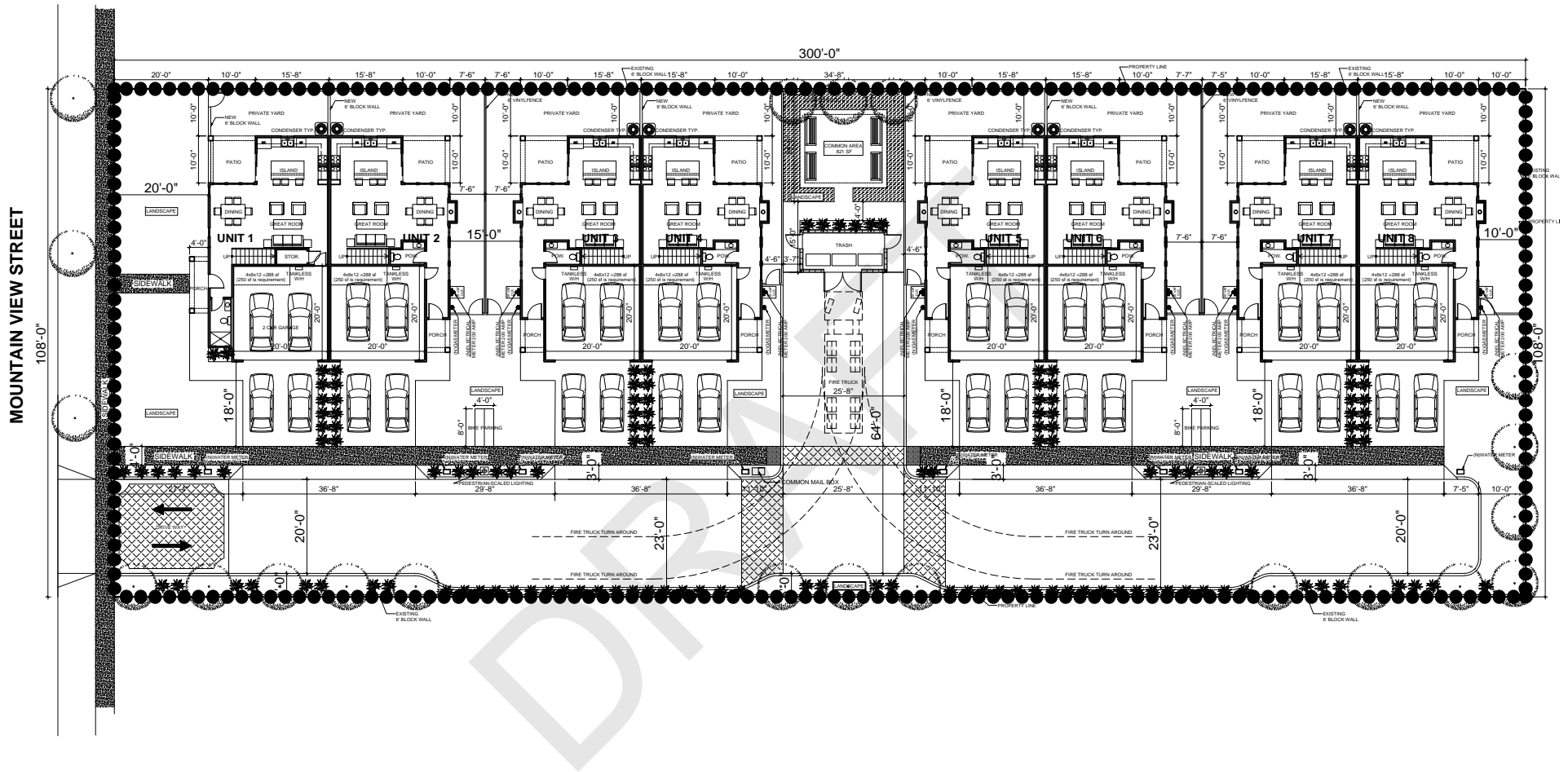




Legend

----- General Plan Amendment Boundary

**Figure 2**  
**Project Location Map**



**Figure 3**  
**Proposed Site Plan**

Source: ANHA Design Studio

**Table 1**  
**Proposed Development Trip Generation**

Trip Generation Rates									
Land Use	Source <sup>1</sup>	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			% In	% Out	Rate	% In	% Out	Rate	
Single-Family Detached Housing	ITE 210	DU	25%	75%	0.74	63%	37%	0.99	9.44
Multifamily Housing (Low-Rise)	ITE 220	DU	23%	77%	0.46	63%	37%	0.56	7.32

Trips Generated									
Land Use	Quantity	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<u>Existing Development</u>									
Single-Family Detached Housing	-2	DU	0	-1	-1	-1	-1	-2	-19
<u>Proposed Development</u>									
Multifamily Housing (Low-Rise)	8	DU	1	3	4	3	3	6	59
<b>NET TRIP DIFFERENCE</b>			<b>+1</b>	<b>+2</b>	<b>+3</b>	<b>+2</b>	<b>+2</b>	<b>+4</b>	<b>+40</b>

Notes:

- (1) ITE = Institute of Transportation Engineers Trip Generation Manual (10th Edition, 2017); ### = Land Use Code.  
 (2) DU= Dwelling Units



**Table 2**  
**Existing and Proposed Buildout Potential**

Land Use Designation	Square Feet	Acres	Max. Density/Intensity	Buildout Potential
<u>Existing</u>				
Low-Medium Density Residential (LMR-11)	311,858	7.2	11 DU / acre	79 DU
General Commercial (GC)	67,605	1.6	1.0 FAR	67,605 SF
<u>Proposed</u>				
Medium Density Residential (MR-15)	285,865	6.6	15 DU / acre	99 DU
Low Density Residential (LR-7)	93,598	2.1	7 DU / acre	15 DU

Notes:

DU = Dwelling Units, SF = Square Feet; FAR = Floor Area Ratio

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**Table 3**  
**Trip Generation Comparison for General Plan Amendment**

Trip Generation Rates									
Land Use	Source <sup>1</sup>	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			% In	% Out	Rate	% In	% Out	Rate	
Low and Low-Medium Density Residential	ITE 210	DU	25%	75%	0.74	63%	37%	0.99	9.44
Medium Density Residential	ITE 220	DU	23%	77%	0.46	63%	37%	0.56	7.32
General Commercial	ITE 820	TSF	62%	38%	0.94	48%	52%	3.81	37.75

Trips Generated									
Land Use	Quantity	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<u>Existing Designations</u>									
Low-Medium Density Residential	-79	DU	-15	-44	-59	-49	-29	-78	-748
General Commercial	-67.605	TSF	-39	-24	-63	-124	-134	-258	-2,552
Subtotal			-54	-68	-122	-173	-163	-336	-3,300
<u>Proposed Designations</u>									
Medium Density Residential	99	DU	10	35	45	35	35	70	725
Low Density Residential	15	DU	3	8	11	9	9	18	142
Subtotal			13	43	56	44	44	88	867
NET TRIP DIFFERENCE			-41	-25	-66	-129	-119	-248	-2,433

Notes:

(1) ITE = Institute of Transportation Engineers Trip Generation Manual (10th Edition, 2017); ### = Land Use Code.

(2) DU= Dwelling Units, TSF = Thousand Square Feet

