Appendices – Table of Contents

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Appendix A

Air Quality and Greenhouse Gas Emissions Modeling Outputs

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,717.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Based on applicant provided information

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	1.00	24.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	5.00	21.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	1,800.00	8,717.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	0.1856	1.4474	1.5148	3.4500e-003	0.1433	0.0591	0.2024	0.0621	0.0567	0.1188	0.0000	294.2552	294.2552	0.0603	2.0500e-003	296.3717
2024	0.1395	0.9354	1.1939	2.0500e-003	7.4000e-003	0.0351	0.0425	2.0000e-003	0.0351	0.0371	0.0000	163.0696	163.0696	0.0114	7.7000e-004	163.5862
2025	0.0346	0.0474	0.0865	1.4000e-004	8.0000e-004	2.1900e-003	2.9900e-003	2.1000e-004	2.0700e-003	2.2800e-003	0.0000	12.5143	12.5143	2.9900e-003	2.0000e-005	12.5939
Maximum	**0.1856**	**1.4474**	**1.5148**	**3.4500e-003**	**0.1433**	**0.0591**	**0.2024**	**0.0621**	**0.0567**	**0.1188**	**0.0000**	**294.2552**	**294.2552**	**0.0603**	**2.0500e-003**	**296.3717**

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					
2023	0.1856	1.4474	1.5147	3.4500e-003	0.0738	0.0591	0.1329	0.0305	0.0567	0.0871	0.0000	294.2549	294.2549	0.0603	2.0500e-003	296.3713
2024	0.1395	0.9354	1.1939	2.0500e-003	7.4000e-003	0.0351	0.0425	2.0000e-003	0.0351	0.0371	0.0000	163.0695	163.0695	0.0114	7.7000e-004	163.5860
2025	0.0346	0.0474	0.0865	1.4000e-004	8.0000e-004	2.1900e-003	2.9900e-003	2.1000e-004	2.0700e-003	2.2800e-003	0.0000	12.5143	12.5143	2.9900e-003	2.0000e-005	12.5939
Maximum	**0.1856**	**1.4474**	**1.5147**	**3.4500e-003**	**0.0738**	**0.0591**	**0.1329**	**0.0305**	**0.0567**	**0.0871**	**0.0000**	**294.2549**	**294.2549**	**0.0603**	**2.0500e-003**	**296.3713**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**45.88**	**0.00**	**28.04**	**49.22**	**0.00**	**20.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2023**	**5-31-2023**	0.8757	0.8757
2	**6-1-2023**	**8-31-2023**	0.3630	0.3630
3	**9-1-2023**	**11-30-2023**	0.2786	0.2786
4	**12-1-2023**	**2-29-2024**	0.2708	0.2708
5	**3-1-2024**	**5-31-2024**	0.2695	0.2695
6	**6-1-2024**	**8-31-2024**	0.2695	0.2695
7	**9-1-2024**	**11-30-2024**	0.2666	0.2666
8	**12-1-2024**	**2-28-2025**	0.1673	0.1673
9	**3-1-2025**	**5-31-2025**	0.0043	0.0043
		Highest	0.8757	0.8757

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0353	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Energy	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	3.2111	3.2111	1.9000e-004	4.0000e-005	3.2287
Mobile	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Waste						0.0000	0.0000		0.0000	0.0000	0.9439	0.0000	0.9439	0.0558	0.0000	2.3385
Water						0.0000	0.0000		0.0000	0.0000	0.0231	0.2668	0.2899	6.3000e-004	5.0000e-005	0.3213
Total	**0.0400**	**6.9700e-003**	**0.0589**	**1.2000e-004**	**0.0120**	**2.4000e-004**	**0.0122**	**3.2000e-003**	**2.3000e-004**	**3.4400e-003**	**0.9670**	**14.0405**	**15.0075**	**0.0573**	**5.3000e-004**	**16.6011**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0353	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Energy	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
Mobile	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Waste						0.0000	0.0000		0.0000	0.0000	0.9439	0.0000	0.9439	0.0558	0.0000	2.3385
Water						0.0000	0.0000		0.0000	0.0000	0.0231	0.2668	0.2899	6.3000e-004	5.0000e-005	0.3213
Total	**0.0400**	**6.8400e-003**	**0.0588**	**1.2000e-004**	**0.0120**	**2.3000e-004**	**0.0122**	**3.2000e-003**	**2.2000e-004**	**3.4300e-003**	**0.9670**	**11.9575**	**12.9245**	**0.0571**	**5.1000e-004**	**14.5073**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.05**	**1.87**	**0.10**	**0.00**	**0.00**	**4.17**	**0.08**	**0.00**	**4.35**	**0.29**	**0.00**	**14.84**	**13.88**	**0.30**	**3.77**	**12.61**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 17,652; Residential Outdoor: 5,884; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9300e-003	0.0330	0.0447	8.0000e-005		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	6.7825	6.7825	3.1000e-004	0.0000	6.7903
Total	**3.9300e-003**	**0.0330**	**0.0447**	**8.0000e-005**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**6.7825**	**6.7825**	**3.1000e-004**	**0.0000**	**6.7903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3130	0.3130	1.0000e-005	1.0000e-005	0.3155
Total	**1.1000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3130**	**0.3130**	**1.0000e-005**	**1.0000e-005**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9300e-003	0.0330	0.0447	8.0000e-005		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	6.7825	6.7825	3.1000e-004	0.0000	6.7902
Total	**3.9300e-003**	**0.0330**	**0.0447**	**8.0000e-005**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**6.7825**	**6.7825**	**3.1000e-004**	**0.0000**	**6.7902**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3130	0.3130	1.0000e-005	1.0000e-005	0.3155
Total	**1.1000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3130**	**0.3130**	**1.0000e-005**	**1.0000e-005**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.5000e-004	0.0000	6.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.1878	0.2403	3.9000e-004		9.1700e-003	9.1700e-003		8.7700e-003	8.7700e-003	0.0000	33.8590	33.8590	6.1600e-003	0.0000	34.0130
Total	**0.0210**	**0.1878**	**0.2403**	**3.9000e-004**	**6.5000e-004**	**9.1700e-003**	**9.8200e-003**	**1.0000e-004**	**8.7700e-003**	**8.8700e-003**	**0.0000**	**33.8590**	**33.8590**	**6.1600e-003**	**0.0000**	**34.0130**

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	1.0000e-005	3.8000e-004	1.0000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1711	0.1711	1.0000e-005	3.0000e-005	0.1795
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	1.0100e-003	7.8000e-004	0.0106	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.8254	2.8254	7.0000e-005	7.0000e-005	2.8486
Total	**1.0200e-003**	**1.1600e-003**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**2.9965**	**2.9965**	**8.0000e-005**	**1.0000e-004**	**3.0280**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.1878	0.2403	3.9000e-004		9.1700e-003	9.1700e-003		8.7700e-003	8.7700e-003	0.0000	33.8590	33.8590	6.1600e-003	0.0000	34.0130
Total	**0.0210**	**0.1878**	**0.2403**	**3.9000e-004**	**2.9000e-004**	**9.1700e-003**	**9.4600e-003**	**4.0000e-005**	**8.7700e-003**	**8.8100e-003**	**0.0000**	**33.8590**	**33.8590**	**6.1600e-003**	**0.0000**	**34.0130**

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	1.0000e-005	3.8000e-004	1.0000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1711	0.1711	1.0000e-005	3.0000e-005	0.1795
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	1.0100e-003	7.8000e-004	0.0106	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.8254	2.8254	7.0000e-005	7.0000e-005	2.8486
Total	**1.0200e-003**	**1.1600e-003**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**2.9965**	**2.9965**	**8.0000e-005**	**1.0000e-004**	**3.0280**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1258	0.0000	0.1258	0.0575	0.0000	0.0575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0707	0.6402	0.4977	1.6200e-003		0.0246	0.0246		0.0227	0.0227	0.0000	142.2659	142.2659	0.0460	0.0000	143.4162
Total	**0.0707**	**0.6402**	**0.4977**	**1.6200e-003**	**0.1258**	**0.0246**	**0.1504**	**0.0575**	**0.0227**	**0.0801**	**0.0000**	**142.2659**	**142.2659**	**0.0460**	**0.0000**	**143.4162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0190	5.1100e-003	9.0000e-005	2.5800e-003	1.4000e-004	2.7200e-003	7.1000e-004	1.3000e-004	8.4000e-004	0.0000	8.5560	8.5560	4.7000e-004	1.3600e-003	8.9730
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	1.7200e-003	1.3200e-003	0.0180	5.0000e-005	6.0300e-003	3.0000e-005	6.0700e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.7814	4.7814	1.2000e-004	1.2000e-004	4.8207
Total	**2.0300e-003**	**0.0204**	**0.0231**	**1.4000e-004**	**8.6100e-003**	**1.7000e-004**	**8.7900e-003**	**2.3100e-003**	**1.6000e-004**	**2.4700e-003**	**0.0000**	**13.3374**	**13.3374**	**5.9000e-004**	**1.4800e-003**	**13.7936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0566	0.0000	0.0566	0.0259	0.0000	0.0259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0707	0.6402	0.4977	1.6200e-003		0.0246	0.0246		0.0227	0.0227	0.0000	142.2657	142.2657	0.0460	0.0000	143.4160
Total	**0.0707**	**0.6402**	**0.4977**	**1.6200e-003**	**0.0566**	**0.0246**	**0.0812**	**0.0259**	**0.0227**	**0.0485**	**0.0000**	**142.2657**	**142.2657**	**0.0460**	**0.0000**	**143.4160**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0190	5.1100e-003	9.0000e-005	2.5800e-003	1.4000e-004	2.7200e-003	7.1000e-004	1.3000e-004	8.4000e-004	0.0000	8.5560	8.5560	4.7000e-004	1.3600e-003	8.9730
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	1.7200e-003	1.3200e-003	0.0180	5.0000e-005	6.0300e-003	3.0000e-005	6.0700e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.7814	4.7814	1.2000e-004	1.2000e-004	4.8207
Total	**2.0300e-003**	**0.0204**	**0.0231**	**1.4000e-004**	**8.6100e-003**	**1.7000e-004**	**8.7900e-003**	**2.3100e-003**	**1.6000e-004**	**2.4700e-003**	**0.0000**	**13.3374**	**13.3374**	**5.9000e-004**	**1.4800e-003**	**13.7936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0857	0.5583	0.6849	1.1400e-003		0.0234	0.0234		0.0234	0.0234	0.0000	89.3530	89.3530	6.9300e-003	0.0000	89.5263
Total	**0.0857**	**0.5583**	**0.6849**	**1.1400e-003**		**0.0234**	**0.0234**		**0.0234**	**0.0234**	**0.0000**	**89.3530**	**89.3530**	**6.9300e-003**	**0.0000**	**89.5263**

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	1.6000e-004	5.7900e-003	2.2000e-003	3.0000e-005	9.6000e-004	3.0000e-005	9.9000e-004	2.8000e-004	3.0000e-005	3.1000e-004	0.0000	2.7052	2.7052	9.0000e-005	3.9000e-004	2.8242
Worker	9.5000e-004	7.3000e-004	9.9500e-003	3.0000e-005	3.3400e-003	2.0000e-005	3.3500e-003	8.9000e-004	2.0000e-005	9.0000e-004	0.0000	2.6428	2.6428	7.0000e-005	7.0000e-005	2.6645
Total	**1.1100e-003**	**6.5200e-003**	**0.0122**	**6.0000e-005**	**4.3000e-003**	**5.0000e-005**	**4.3400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2100e-003**	**0.0000**	**5.3480**	**5.3480**	**1.6000e-004**	**4.6000e-004**	**5.4888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0857	0.5583	0.6849	1.1400e-003		0.0234	0.0234		0.0234	0.0234	0.0000	89.3529	89.3529	6.9300e-003	0.0000	89.5262
Total	**0.0857**	**0.5583**	**0.6849**	**1.1400e-003**		**0.0234**	**0.0234**		**0.0234**	**0.0234**	**0.0000**	**89.3529**	**89.3529**	**6.9300e-003**	**0.0000**	**89.5262**

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	1.6000e-004	5.7900e-003	2.2000e-003	3.0000e-005	9.6000e-004	3.0000e-005	9.9000e-004	2.8000e-004	3.0000e-005	3.1000e-004	0.0000	2.7052	2.7052	9.0000e-005	3.9000e-004	2.8242
Worker	9.5000e-004	7.3000e-004	9.9500e-003	3.0000e-005	3.3400e-003	2.0000e-005	3.3500e-003	8.9000e-004	2.0000e-005	9.0000e-004	0.0000	2.6428	2.6428	7.0000e-005	7.0000e-005	2.6645
Total	**1.1100e-003**	**6.5200e-003**	**0.0122**	**6.0000e-005**	**4.3000e-003**	**5.0000e-005**	**4.3400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2100e-003**	**0.0000**	**5.3480**	**5.3480**	**1.6000e-004**	**4.6000e-004**	**5.4888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1377	0.9242	1.1742	1.9600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	154.0163	154.0163	0.0112	0.0000	154.2955
Total	**0.1377**	**0.9242**	**1.1742**	**1.9600e-003**		**0.0350**	**0.0350**		**0.0350**	**0.0350**	**0.0000**	**154.0163**	**154.0163**	**0.0112**	**0.0000**	**154.2955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	0.0100	3.7400e-003	5.0000e-005	1.6500e-003	6.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	4.5958	4.5958	1.6000e-004	6.7000e-004	4.7985
Worker	1.5300e-003	1.1200e-003	0.0160	5.0000e-005	5.7500e-003	3.0000e-005	5.7800e-003	1.5300e-003	3.0000e-005	1.5600e-003	0.0000	4.4575	4.4575	1.0000e-004	1.1000e-004	4.4922
Total	**1.8100e-003**	**0.0112**	**0.0197**	**1.0000e-004**	**7.4000e-003**	**9.0000e-005**	**7.4900e-003**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**0.0000**	**9.0533**	**9.0533**	**2.6000e-004**	**7.8000e-004**	**9.2907**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.1377	0.9242	1.1742	1.9600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	154.0161	154.0161	0.0112	0.0000	154.2954
Total	**0.1377**	**0.9242**	**1.1742**	**1.9600e-003**		**0.0350**	**0.0350**		**0.0350**	**0.0350**	**0.0000**	**154.0161**	**154.0161**	**0.0112**	**0.0000**	**154.2954**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	0.0100	3.7400e-003	5.0000e-005	1.6500e-003	6.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	4.5958	4.5958	1.6000e-004	6.7000e-004	4.7985
Worker	1.5300e-003	1.1200e-003	0.0160	5.0000e-005	5.7500e-003	3.0000e-005	5.7800e-003	1.5300e-003	3.0000e-005	1.5600e-003	0.0000	4.4575	4.4575	1.0000e-004	1.1000e-004	4.4922
Total	**1.8100e-003**	**0.0112**	**0.0197**	**1.0000e-004**	**7.4000e-003**	**9.0000e-005**	**7.4900e-003**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**0.0000**	**9.0533**	**9.0533**	**2.6000e-004**	**7.8000e-004**	**9.2907**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	4.9000e-004	3.3900e-003	4.4600e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.5879	0.5879	4.0000e-005	0.0000	0.5888
Total	**4.9000e-004**	**3.3900e-003**	**4.4600e-003**	**1.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.5879**	**0.5879**	**4.0000e-005**	**0.0000**	**0.5888**

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	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0172	0.0172	0.0000	0.0000	0.0180
Worker	1.0000e-005	0.0000	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0166	0.0166	0.0000	0.0000	0.0167
Total	**1.0000e-005**	**4.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0338**	**0.0338**	**0.0000**	**0.0000**	**0.0347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	4.9000e-004	3.3900e-003	4.4600e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.5879	0.5879	4.0000e-005	0.0000	0.5888
Total	**4.9000e-004**	**3.3900e-003**	**4.4600e-003**	**1.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.5879**	**0.5879**	**4.0000e-005**	**0.0000**	**0.5888**

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	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0172	0.0172	0.0000	0.0000	0.0180
Worker	1.0000e-005	0.0000	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0166	0.0166	0.0000	0.0000	0.0167
Total	**1.0000e-005**	**4.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0338**	**0.0338**	**0.0000**	**0.0000**	**0.0347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	3.5900e-003	0.0318	0.0610	1.0000e-004		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	8.6266	8.6266	2.7900e-003	0.0000	8.6964
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.6200e-003**	**0.0318**	**0.0610**	**1.0000e-004**		**1.5300e-003**	**1.5300e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**8.6266**	**8.6266**	**2.7900e-003**	**0.0000**	**8.6964**

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	1.6000e-004	1.2000e-004	1.7100e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5016
Total	**1.6000e-004**	**1.2000e-004**	**1.7100e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4979**	**0.4979**	**1.0000e-005**	**1.0000e-005**	**0.5016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5900e-003	0.0318	0.0610	1.0000e-004		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	8.6266	8.6266	2.7900e-003	0.0000	8.6964
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.6200e-003**	**0.0318**	**0.0610**	**1.0000e-004**		**1.5300e-003**	**1.5300e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**8.6266**	**8.6266**	**2.7900e-003**	**0.0000**	**8.6964**

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	1.6000e-004	1.2000e-004	1.7100e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5016
Total	**1.6000e-004**	**1.2000e-004**	**1.7100e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4979**	**0.4979**	**1.0000e-005**	**1.0000e-005**	**0.5016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	0.0285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7900e-003	0.0120	0.0190	3.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	2.6809	2.6809	1.5000e-004	0.0000	2.6846
Total	**0.0303**	**0.0120**	**0.0190**	**3.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**2.6809**	**2.6809**	**1.5000e-004**	**0.0000**	**2.6846**

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	3.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0871	0.0871	0.0000	0.0000	0.0878
Total	**3.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0871**	**0.0871**	**0.0000**	**0.0000**	**0.0878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	0.0285					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7900e-003	0.0120	0.0190	3.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	2.6809	2.6809	1.5000e-004	0.0000	2.6846
Total	**0.0303**	**0.0120**	**0.0190**	**3.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**2.6809**	**2.6809**	**1.5000e-004**	**0.0000**	**2.6846**

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	3.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0871	0.0871	0.0000	0.0000	0.0878
Total	**3.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0871**	**0.0871**	**0.0000**	**0.0000**	**0.0878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Unmitigated	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
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
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.9358	1.9358	1.6000e-004	2.0000e-005	1.9458
NaturalGas Mitigated	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
NaturalGas Unmitigated	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2753	1.2753	2.0000e-005	2.0000e-005	1.2829

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	23897.8	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2753	1.2753	2.0000e-005	2.0000e-005	1.2829
Total		**1.3000e-004**	**1.1000e-003**	**4.7000e-004**	**1.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**1.2753**	**1.2753**	**2.0000e-005**	**2.0000e-005**	**1.2829**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	21140.5	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
Total		**1.1000e-004**	**9.7000e-004**	**4.1000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1281**	**1.1281**	**2.0000e-005**	**2.0000e-005**	**1.1348**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	3097.5	0.5493	5.0000e-005	1.0000e-005	0.5522
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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	7818.09	1.3865	1.2000e-004	1.0000e-005	1.3937
Total		**1.9358**	**1.7000e-004**	**2.0000e-005**	**1.9458**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0353	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Unmitigated	0.0353	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591

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	2.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.0000e-005	2.1000e-004	9.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	0.0000	0.0000	0.2416
Landscaping	3.2000e-004	1.2000e-004	0.0105	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0172	0.0172	2.0000e-005	0.0000	0.0176
Total	**0.0353**	**3.3000e-004**	**0.0106**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**2.0000e-005**	**0.0000**	**0.2591**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.0000e-005	2.1000e-004	9.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	0.0000	0.0000	0.2416
Landscaping	3.2000e-004	1.2000e-004	0.0105	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0172	0.0172	2.0000e-005	0.0000	0.0176
Total	**0.0353**	**3.3000e-004**	**0.0106**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**2.0000e-005**	**0.0000**	**0.2591**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2899	6.3000e-004	5.0000e-005	0.3213
Unmitigated	0.2899	6.3000e-004	5.0000e-005	0.3213

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0 / 0.017988	0.0354	0.0000	0.0000	0.0356
Single Family Housing	0.065154 / 0.0410754	0.2544	6.2000e-004	5.0000e-005	0.2856
Total		**0.2899**	**6.2000e-004**	**5.0000e-005**	**0.3213**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0 / 0.017988	0.0354	0.0000	0.0000	0.0356
Single Family Housing	0.065154 / 0.0410754	0.2544	6.2000e-004	5.0000e-005	0.2856
Total		**0.2899**	**6.2000e-004**	**5.0000e-005**	**0.3213**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9439	0.0558	0.0000	2.3385
Unmitigated	0.9439	0.0558	0.0000	2.3385

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Single Family Housing	1.23	0.2497	0.0148	0.0000	0.6186
Total		**0.9439**	**0.0558**	**0.0000**	**2.3385**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Single Family Housing	1.23	0.2497	0.0148	0.0000	0.6186
Total		**0.9439**	**0.0558**	**0.0000**	**2.3385**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,717.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Based on applicant provided information

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	1.00	24.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	5.00	21.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	1,800.00	8,717.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	5.1288	43.2120	40.6629	0.1087	6.3054	1.7182	8.0235	2.7679	1.6159	4.3837	0.0000	10,436.9127	10,436.9127	2.6497	0.0835	10,528.0354
2024	1.0654	7.1356	9.1227	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,373.8441	1,373.8441	0.0962	6.4400e-003	1,378.1687
2025	3.2061	9.5278	14.3065	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,212.4379	2,212.4379	0.3468	7.2800e-003	2,223.2763
Maximum	**5.1288**	**43.2120**	**40.6629**	**0.1087**	**6.3054**	**1.7182**	**8.0235**	**2.7679**	**1.6159**	**4.3837**	**0.0000**	**10,436.9127**	**10,436.9127**	**2.6497**	**0.0835**	**10,528.0354**

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					
2023	5.1288	43.2120	40.6629	0.1087	3.1507	1.7182	4.8689	1.3294	1.6159	2.9452	0.0000	10,436.9127	10,436.9127	2.6497	0.0835	10,528.0354
2024	1.0654	7.1356	9.1227	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,373.8441	1,373.8441	0.0962	6.4400e-003	1,378.1687
2025	3.2061	9.5278	14.3065	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,212.4379	2,212.4379	0.3468	7.2800e-003	2,223.2763
Maximum	**5.1288**	**43.2120**	**40.6629**	**0.1087**	**3.1507**	**1.7182**	**4.8689**	**1.3294**	**1.6159**	**2.9452**	**0.0000**	**10,436.9127**	**10,436.9127**	**2.6497**	**0.0835**	**10,528.0354**

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**48.71**	**0.00**	**35.75**	**51.12**	**0.00**	**28.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Mobile	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Total	**0.2240**	**0.0522**	**0.3687**	**7.8000e-004**	**0.0687**	**2.7400e-003**	**0.0714**	**0.0183**	**2.7100e-003**	**0.0210**	**0.0000**	**95.2546**	**95.2546**	**4.6100e-003**	**3.1600e-003**	**96.3115**

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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Mobile	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Total	**0.2239**	**0.0515**	**0.3684**	**7.7000e-004**	**0.0687**	**2.6800e-003**	**0.0714**	**0.0183**	**2.6500e-003**	**0.0210**	**0.0000**	**94.3659**	**94.3659**	**4.5900e-003**	**3.1400e-003**	**95.4175**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**1.32**	**0.08**	**1.28**	**0.00**	**2.19**	**0.08**	**0.00**	**2.21**	**0.29**	**0.00**	**0.93**	**0.93**	**0.43**	**0.63**	**0.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	
4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 17,652; Residential Outdoor: 5,884; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	1	1.00	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 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349		623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**		**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	9.5800e-003	6.4300e-003	0.1055	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		30.0600	30.0600	7.2000e-004	6.8000e-004	30.2800
Total	**9.5800e-003**	**6.4300e-003**	**0.1055**	**2.9000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**30.0600**	**30.0600**	**7.2000e-004**	**6.8000e-004**	**30.2800**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349	0.0000	623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	9.5800e-003	6.4300e-003	0.1055	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		30.0600	30.0600	7.2000e-004	6.8000e-004	30.2800
Total	**9.5800e-003**	**6.4300e-003**	**0.1055**	**2.9000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**30.0600**	**30.0600**	**7.2000e-004**	**6.8000e-004**	**30.2800**

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0200	0.0000	0.0200	3.0200e-003	0.0000	3.0200e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0200**	**0.2821**	**0.3021**	**3.0200e-003**	**0.2698**	**0.2728**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	2.0000e-004	0.0111	3.1300e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8012	5.8012	3.2000e-004	9.2000e-004	6.0839
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
Worker	0.0319	0.0214	0.3517	9.8000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		100.1999	100.1999	2.4000e-003	2.2600e-003	100.9334
Total	**0.0321**	**0.0326**	**0.3549**	**1.0300e-003**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**106.0011**	**106.0011**	**2.7200e-003**	**3.1800e-003**	**107.0173**

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					8.9800e-003	0.0000	8.9800e-003	1.3600e-003	0.0000	1.3600e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**8.9800e-003**	**0.2821**	**0.2911**	**1.3600e-003**	**0.2698**	**0.2712**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	2.0000e-004	0.0111	3.1300e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8012	5.8012	3.2000e-004	9.2000e-004	6.0839
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
Worker	0.0319	0.0214	0.3517	9.8000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		100.1999	100.1999	2.4000e-003	2.2600e-003	100.9334
Total	**0.0321**	**0.0326**	**0.3549**	**1.0300e-003**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**106.0011**	**106.0011**	**2.7200e-003**	**3.1800e-003**	**107.0173**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7158	0.0000	5.7158	2.6124	0.0000	2.6124			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294		7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**5.7158**	**1.1189**	**6.8347**	**2.6124**	**1.0294**	**3.6418**		**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0147	0.8213	0.2310	3.9000e-003	0.1193	6.2200e-003	0.1255	0.0327	5.9500e-003	0.0386		428.4958	428.4958	0.0238	0.0681	449.3778
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
Worker	0.0799	0.0536	0.8793	2.4500e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		250.4998	250.4998	6.0000e-003	5.6500e-003	252.3336
Total	**0.0946**	**0.8749**	**1.1103**	**6.3500e-003**	**0.3987**	**7.7900e-003**	**0.4065**	**0.1068**	**7.4000e-003**	**0.1142**		**678.9956**	**678.9956**	**0.0298**	**0.0737**	**701.7114**

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					2.5721	0.0000	2.5721	1.1756	0.0000	1.1756			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294	0.0000	7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**2.5721**	**1.1189**	**3.6910**	**1.1756**	**1.0294**	**2.2050**	**0.0000**	**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0147	0.8213	0.2310	3.9000e-003	0.1193	6.2200e-003	0.1255	0.0327	5.9500e-003	0.0386		428.4958	428.4958	0.0238	0.0681	449.3778
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
Worker	0.0799	0.0536	0.8793	2.4500e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		250.4998	250.4998	6.0000e-003	5.6500e-003	252.3336
Total	**0.0946**	**0.8749**	**1.1103**	**6.3500e-003**	**0.3987**	**7.7900e-003**	**0.4065**	**0.1068**	**7.4000e-003**	**0.1142**		**678.9956**	**678.9956**	**0.0298**	**0.0737**	**701.7114**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080		1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**		**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.2100e-003	0.0726	0.0286	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.0000e-004	4.0900e-003		39.2062	39.2062	1.3200e-003	5.6800e-003	40.9305
Worker	0.0128	8.5800e-003	0.1407	3.9000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		40.0800	40.0800	9.6000e-004	9.0000e-004	40.3734
Total	**0.0150**	**0.0812**	**0.1693**	**7.5000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**79.2862**	**79.2862**	**2.2800e-003**	**6.5800e-003**	**81.3039**

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	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080	0.0000	1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.2100e-003	0.0726	0.0286	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.0000e-004	4.0900e-003		39.2062	39.2062	1.3200e-003	5.6800e-003	40.9305
Worker	0.0128	8.5800e-003	0.1407	3.9000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		40.0800	40.0800	9.6000e-004	9.0000e-004	40.3734
Total	**0.0150**	**0.0812**	**0.1693**	**7.5000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**79.2862**	**79.2862**	**2.2800e-003**	**6.5800e-003**	**81.3039**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674		1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**		**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.1600e-003	0.0729	0.0281	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.6422	38.6422	1.3200e-003	5.6000e-003	40.3446
Worker	0.0119	7.6700e-003	0.1313	3.8000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		39.2178	39.2178	8.7000e-004	8.4000e-004	39.4904
Total	**0.0141**	**0.0806**	**0.1594**	**7.4000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**77.8600**	**77.8600**	**2.1900e-003**	**6.4400e-003**	**79.8350**

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	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674	0.0000	1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.1600e-003	0.0729	0.0281	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.6422	38.6422	1.3200e-003	5.6000e-003	40.3446
Worker	0.0119	7.6700e-003	0.1313	3.8000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		39.2178	39.2178	8.7000e-004	8.4000e-004	39.4904
Total	**0.0141**	**0.0806**	**0.1594**	**7.4000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**77.8600**	**77.8600**	**2.1900e-003**	**6.4400e-003**	**79.8350**

3.5 Building Construction - 2025

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324		1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**		**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.1100e-003	0.0726	0.0277	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		37.9379	37.9379	1.3200e-003	5.5100e-003	39.6119
Worker	0.0112	6.8900e-003	0.1225	3.7000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		38.2576	38.2576	7.8000e-004	7.9000e-004	38.5117
Total	**0.0133**	**0.0795**	**0.1502**	**7.2000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**76.1954**	**76.1954**	**2.1000e-003**	**6.3000e-003**	**78.1236**

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324	0.0000	1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.1100e-003	0.0726	0.0277	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		37.9379	37.9379	1.3200e-003	5.5100e-003	39.6119
Worker	0.0112	6.8900e-003	0.1225	3.7000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		38.2576	38.2576	7.8000e-004	7.9000e-004	38.5117
Total	**0.0133**	**0.0795**	**0.1502**	**7.2000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**76.1954**	**76.1954**	**2.1000e-003**	**6.3000e-003**	**78.1236**

3.6 Paving - 2025

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172		792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**		**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0140	8.6200e-003	0.1532	4.6000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		47.8219	47.8219	9.8000e-004	9.8000e-004	48.1396
Total	**0.0140**	**8.6200e-003**	**0.1532**	**4.6000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**47.8219**	**47.8219**	**9.8000e-004**	**9.8000e-004**	**48.1396**

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172	0.0000	792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**	**0.0000**	**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0140	8.6200e-003	0.1532	4.6000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		47.8219	47.8219	9.8000e-004	9.8000e-004	48.1396
Total	**0.0140**	**8.6200e-003**	**0.1532**	**4.6000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**47.8219**	**47.8219**	**9.8000e-004**	**9.8000e-004**	**48.1396**

3.7 Architectural Coating - 2025

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	2.7174					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**2.8883**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.7900e-003	1.7200e-003	0.0306	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.5644	9.5644	2.0000e-004	2.0000e-004	9.6279
Total	**2.7900e-003**	**1.7200e-003**	**0.0306**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.5644**	**9.5644**	**2.0000e-004**	**2.0000e-004**	**9.6279**

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	2.7174					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**2.8883**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.7900e-003	1.7200e-003	0.0306	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.5644	9.5644	2.0000e-004	2.0000e-004	9.6279
Total	**2.7900e-003**	**1.7200e-003**	**0.0306**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.5644**	**9.5644**	**2.0000e-004**	**2.0000e-004**	**9.6279**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Unmitigated	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
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
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
NaturalGas Unmitigated	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	65.4733	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Total		**7.1000e-004**	**6.0300e-003**	**2.5700e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**		**7.7027**	**7.7027**	**1.5000e-004**	**1.4000e-004**	**7.7485**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	0.0579191	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Total		**6.2000e-004**	**5.3400e-003**	**2.2700e-003**	**3.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**6.8140**	**6.8140**	**1.3000e-004**	**1.2000e-004**	**6.8545**

6.0 Area Detail

6.1 Mitigation Measures Area

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Unmitigated	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572

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	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1960**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1960**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,717.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Based on applicant provided information

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	1.00	24.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	5.00	21.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	1,800.00	8,717.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	5.1346	43.2631	40.5368	0.1085	6.3054	1.7182	8.0235	2.7679	1.6159	4.3837	0.0000	10,414.7942	10,414.7942	2.6498	0.0841	10,506.1061
2024	1.0660	7.1399	9.1112	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,371.6405	1,371.6405	0.0962	6.5100e-003	1,375.9848
2025	3.2072	9.5329	14.2814	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,207.5226	2,207.5226	0.3468	7.3900e-003	2,218.3975
Maximum	**5.1346**	**43.2631**	**40.5368**	**0.1085**	**6.3054**	**1.7182**	**8.0235**	**2.7679**	**1.6159**	**4.3837**	**0.0000**	**10,414.7942**	**10,414.7942**	**2.6498**	**0.0841**	**10,506.1061**

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					
2023	5.1346	43.2631	40.5368	0.1085	3.1507	1.7182	4.8689	1.3294	1.6159	2.9452	0.0000	10,414.7942	10,414.7942	2.6498	0.0841	10,506.1061
2024	1.0660	7.1399	9.1112	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,371.6405	1,371.6405	0.0962	6.5100e-003	1,375.9848
2025	3.2072	9.5329	14.2814	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,207.5226	2,207.5226	0.3468	7.3900e-003	2,218.3975
Maximum	**5.1346**	**43.2631**	**40.5368**	**0.1085**	**3.1507**	**1.7182**	**4.8689**	**1.3294**	**1.6159**	**2.9452**	**0.0000**	**10,414.7942**	**10,414.7942**	**2.6498**	**0.0841**	**10,506.1061**

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**48.71**	**0.00**	**35.75**	**51.12**	**0.00**	**28.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Mobile	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Total	**0.2230**	**0.0543**	**0.3594**	**7.5000e-004**	**0.0687**	**2.7400e-003**	**0.0714**	**0.0183**	**2.7100e-003**	**0.0210**	**0.0000**	**92.1896**	**92.1896**	**4.7200e-003**	**3.2600e-003**	**93.2792**

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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Mobile	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Total	**0.2229**	**0.0537**	**0.3591**	**7.4000e-004**	**0.0687**	**2.6800e-003**	**0.0714**	**0.0183**	**2.6500e-003**	**0.0210**	**0.0000**	**91.3009**	**91.3009**	**4.7000e-003**	**3.2400e-003**	**92.3852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.04	1.27	0.08	1.33	0.00	2.19	0.08	0.00	2.21	0.29	0.00	0.96	0.96	0.42	0.61	0.96

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	
4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 17,652; Residential Outdoor: 5,884; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	1	1.00	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 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349		623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**		**623.0346**	**623.0346**	**0.0285**		**623.7472**

32501 Coast Highway - AQGHG - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	0.0101	7.0300e-003	0.0955	2.8000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		28.3155	28.3155	7.3000e-004	7.2000e-004	28.5480
Total	**0.0101**	**7.0300e-003**	**0.0955**	**2.8000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**28.3155**	**28.3155**	**7.3000e-004**	**7.2000e-004**	**28.5480**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349	0.0000	623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	0.0101	7.0300e-003	0.0955	2.8000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		28.3155	28.3155	7.3000e-004	7.2000e-004	28.5480
Total	**0.0101**	**7.0300e-003**	**0.0955**	**2.8000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**28.3155**	**28.3155**	**7.3000e-004**	**7.2000e-004**	**28.5480**

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0200	0.0000	0.0200	3.0200e-003	0.0000	3.0200e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0200**	**0.2821**	**0.3021**	**3.0200e-003**	**0.2698**	**0.2728**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	1.9000e-004	0.0117	3.1700e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8077	5.8077	3.2000e-004	9.2000e-004	6.0907
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
Worker	0.0337	0.0235	0.3183	9.2000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		94.3849	94.3849	2.4300e-003	2.4000e-003	95.1601
Total	**0.0339**	**0.0351**	**0.3215**	**9.7000e-004**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**100.1926**	**100.1926**	**2.7500e-003**	**3.3200e-003**	**101.2508**

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					8.9800e-003	0.0000	8.9800e-003	1.3600e-003	0.0000	1.3600e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**8.9800e-003**	**0.2821**	**0.2911**	**1.3600e-003**	**0.2698**	**0.2712**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	1.9000e-004	0.0117	3.1700e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8077	5.8077	3.2000e-004	9.2000e-004	6.0907
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
Worker	0.0337	0.0235	0.3183	9.2000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		94.3849	94.3849	2.4300e-003	2.4000e-003	95.1601
Total	**0.0339**	**0.0351**	**0.3215**	**9.7000e-004**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**100.1926**	**100.1926**	**2.7500e-003**	**3.3200e-003**	**101.2508**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7158	0.0000	5.7158	2.6124	0.0000	2.6124			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294		7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**5.7158**	**1.1189**	**6.8347**	**2.6124**	**1.0294**	**3.6418**		**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0137	0.8605	0.2344	3.9000e-003	0.1193	6.2400e-003	0.1255	0.0327	5.9700e-003	0.0387		428.9784	428.9784	0.0238	0.0682	449.8823
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
Worker	0.0843	0.0586	0.7958	2.3100e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		235.9622	235.9622	6.0800e-003	5.9900e-003	237.9003
Total	**0.0980**	**0.9191**	**1.0301**	**6.2100e-003**	**0.3987**	**7.8100e-003**	**0.4065**	**0.1068**	**7.4200e-003**	**0.1142**		**664.9407**	**664.9407**	**0.0299**	**0.0741**	**687.7826**

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					2.5721	0.0000	2.5721	1.1756	0.0000	1.1756			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294	0.0000	7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**2.5721**	**1.1189**	**3.6910**	**1.1756**	**1.0294**	**2.2050**	**0.0000**	**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0137	0.8605	0.2344	3.9000e-003	0.1193	6.2400e-003	0.1255	0.0327	5.9700e-003	0.0387		428.9784	428.9784	0.0238	0.0682	449.8823
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
Worker	0.0843	0.0586	0.7958	2.3100e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		235.9622	235.9622	6.0800e-003	5.9900e-003	237.9003
Total	**0.0980**	**0.9191**	**1.0301**	**6.2100e-003**	**0.3987**	**7.8100e-003**	**0.4065**	**0.1068**	**7.4200e-003**	**0.1142**		**664.9407**	**664.9407**	**0.0299**	**0.0741**	**687.7826**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080		1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**		**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.1200e-003	0.0762	0.0295	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		39.2771	39.2771	1.3100e-003	5.6900e-003	41.0058
Worker	0.0135	9.3800e-003	0.1273	3.7000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		37.7540	37.7540	9.7000e-004	9.6000e-004	38.0641
Total	**0.0156**	**0.0856**	**0.1568**	**7.3000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.4000e-004**	**0.0162**		**77.0310**	**77.0310**	**2.2800e-003**	**6.6500e-003**	**79.0698**

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	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080	0.0000	1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.1200e-003	0.0762	0.0295	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		39.2771	39.2771	1.3100e-003	5.6900e-003	41.0058
Worker	0.0135	9.3800e-003	0.1273	3.7000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		37.7540	37.7540	9.7000e-004	9.6000e-004	38.0641
Total	**0.0156**	**0.0856**	**0.1568**	**7.3000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.4000e-004**	**0.0162**		**77.0310**	**77.0310**	**2.2800e-003**	**6.6500e-003**	**79.0698**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674		1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**		**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.0600e-003	0.0766	0.0290	3.6000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.7132	38.7132	1.3100e-003	5.6200e-003	40.4199
Worker	0.0126	8.3800e-003	0.1188	3.6000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		36.9432	36.9432	8.8000e-004	8.9000e-004	37.2312
Total	**0.0147**	**0.0849**	**0.1479**	**7.2000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**75.6564**	**75.6564**	**2.1900e-003**	**6.5100e-003**	**77.6512**

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	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674	0.0000	1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.0600e-003	0.0766	0.0290	3.6000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.7132	38.7132	1.3100e-003	5.6200e-003	40.4199
Worker	0.0126	8.3800e-003	0.1188	3.6000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		36.9432	36.9432	8.8000e-004	8.9000e-004	37.2312
Total	**0.0147**	**0.0849**	**0.1479**	**7.2000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**75.6564**	**75.6564**	**2.1900e-003**	**6.5100e-003**	**77.6512**

3.5 Building Construction - 2025

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324		1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**		**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.0100e-003	0.0762	0.0286	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.1000e-003		38.0086	38.0086	1.3200e-003	5.5200e-003	39.6868
Worker	0.0119	7.5300e-003	0.1110	3.5000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		36.0415	36.0415	8.0000e-004	8.3000e-004	36.3101
Total	**0.0139**	**0.0837**	**0.1396**	**7.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**74.0501**	**74.0501**	**2.1200e-003**	**6.3500e-003**	**75.9969**

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324	0.0000	1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.0100e-003	0.0762	0.0286	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.1000e-003		38.0086	38.0086	1.3200e-003	5.5200e-003	39.6868
Worker	0.0119	7.5300e-003	0.1110	3.5000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		36.0415	36.0415	8.0000e-004	8.3000e-004	36.3101
Total	**0.0139**	**0.0837**	**0.1396**	**7.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**74.0501**	**74.0501**	**2.1200e-003**	**6.3500e-003**	**75.9969**

3.6 Paving - 2025

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172		792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**		**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0148	9.4200e-003	0.1388	4.3000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		45.0519	45.0519	1.0000e-003	1.0400e-003	45.3876
Total	**0.0148**	**9.4200e-003**	**0.1388**	**4.3000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**45.0519**	**45.0519**	**1.0000e-003**	**1.0400e-003**	**45.3876**

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172	0.0000	792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**	**0.0000**	**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0148	9.4200e-003	0.1388	4.3000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		45.0519	45.0519	1.0000e-003	1.0400e-003	45.3876
Total	**0.0148**	**9.4200e-003**	**0.1388**	**4.3000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**45.0519**	**45.0519**	**1.0000e-003**	**1.0400e-003**	**45.3876**

3.7 Architectural Coating - 2025

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	2.7174					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**2.8883**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.9700e-003	1.8800e-003	0.0278	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.0104	9.0104	2.0000e-004	2.1000e-004	9.0775
Total	**2.9700e-003**	**1.8800e-003**	**0.0278**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.0104**	**9.0104**	**2.0000e-004**	**2.1000e-004**	**9.0775**

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	2.7174					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**2.8883**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.9700e-003	1.8800e-003	0.0278	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.0104	9.0104	2.0000e-004	2.1000e-004	9.0775
Total	**2.9700e-003**	**1.8800e-003**	**0.0278**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.0104**	**9.0104**	**2.0000e-004**	**2.1000e-004**	**9.0775**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Unmitigated	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
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
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
NaturalGas Unmitigated	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485

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					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	65.4733	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Total		**7.1000e-004**	**6.0300e-003**	**2.5700e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**		**7.7027**	**7.7027**	**1.5000e-004**	**1.4000e-004**	**7.7485**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	0.0579191	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Total		**6.2000e-004**	**5.3400e-003**	**2.2700e-003**	**3.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**6.8140**	**6.8140**	**1.3000e-004**	**1.2000e-004**	**6.8545**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Unmitigated	0.1960	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572

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	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1960**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1960**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG - Mitigated

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,127.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Implemented Tier 4 final mitigation

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	24.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	5.00	21.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00
tblLandUse	LandUseSquareFeet	1,800.00	8,127.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	0.1856	1.4474	1.5148	3.4500e-003	0.1433	0.0591	0.2024	0.0621	0.0567	0.1188	0.0000	294.2552	294.2552	0.0603	2.0500e-003	296.3717
2024	0.1395	0.9354	1.1939	2.0500e-003	7.4000e-003	0.0351	0.0425	2.0000e-003	0.0351	0.0371	0.0000	163.0696	163.0696	0.0114	7.7000e-004	163.5862
2025	0.0328	0.0474	0.0865	1.4000e-004	8.0000e-004	2.1900e-003	2.9900e-003	2.1000e-004	2.0700e-003	2.2800e-003	0.0000	12.5143	12.5143	2.9900e-003	2.0000e-005	12.5939
Maximum	**0.1856**	**1.4474**	**1.5148**	**3.4500e-003**	**0.1433**	**0.0591**	**0.2024**	**0.0621**	**0.0567**	**0.1188**	**0.0000**	**294.2552**	**294.2552**	**0.0603**	**2.0500e-003**	**296.3717**

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					
2023	0.0442	0.3868	1.7828	3.4500e-003	0.0738	4.9100e-003	0.0787	0.0305	4.8900e-003	0.0353	0.0000	294.2549	294.2549	0.0603	2.0500e-003	296.3713
2024	0.0276	0.4431	1.1394	2.0500e-003	7.4000e-003	2.3800e-003	9.7900e-003	2.0000e-003	2.3800e-003	4.3800e-003	0.0000	163.0695	163.0695	0.0114	7.7000e-004	163.5860
2025	0.0285	8.4200e-003	0.1002	1.4000e-004	8.0000e-004	2.2000e-004	1.0200e-003	2.1000e-004	2.2000e-004	4.3000e-004	0.0000	12.5143	12.5143	2.9900e-003	2.0000e-005	12.5939
Maximum	**0.0442**	**0.4431**	**1.7828**	**3.4500e-003**	**0.0738**	**4.9100e-003**	**0.0787**	**0.0305**	**4.8900e-003**	**0.0353**	**0.0000**	**294.2549**	**294.2549**	**0.0603**	**2.0500e-003**	**296.3713**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**71.96**	**65.51**	**-8.13**	**0.00**	**45.88**	**92.21**	**63.89**	**49.22**	**92.02**	**74.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2023**	**5-31-2023**	0.8757	0.1425
2	**6-1-2023**	**8-31-2023**	0.3630	0.1283
3	**9-1-2023**	**11-30-2023**	0.2786	0.1168
4	**12-1-2023**	**2-29-2024**	0.2708	0.1168
5	**3-1-2024**	**5-31-2024**	0.2695	0.1180
6	**6-1-2024**	**8-31-2024**	0.2695	0.1179
7	**9-1-2024**	**11-30-2024**	0.2666	0.1167
8	**12-1-2024**	**2-28-2025**	0.1657	0.0730
9	**3-1-2025**	**5-31-2025**	0.0041	0.0029
		Highest	0.8757	0.1425

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0330	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Energy	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	3.2111	3.2111	1.9000e-004	4.0000e-005	3.2287
Mobile	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Waste						0.0000	0.0000		0.0000	0.0000	0.9439	0.0000	0.9439	0.0558	0.0000	2.3385
Water						0.0000	0.0000		0.0000	0.0000	0.0231	0.2668	0.2899	6.3000e-004	5.0000e-005	0.3213
Total	**0.0377**	**6.9700e-003**	**0.0589**	**1.2000e-004**	**0.0120**	**2.4000e-004**	**0.0122**	**3.2000e-003**	**2.3000e-004**	**3.4400e-003**	**0.9670**	**14.0405**	**15.0075**	**0.0573**	**5.3000e-004**	**16.6011**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0330	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Energy	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
Mobile	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Waste						0.0000	0.0000		0.0000	0.0000	0.9439	0.0000	0.9439	0.0558	0.0000	2.3385
Water						0.0000	0.0000		0.0000	0.0000	0.0231	0.2668	0.2899	6.3000e-004	5.0000e-005	0.3213
Total	**0.0377**	**6.8400e-003**	**0.0588**	**1.2000e-004**	**0.0120**	**2.3000e-004**	**0.0122**	**3.2000e-003**	**2.2000e-004**	**3.4300e-003**	**0.9670**	**11.9575**	**12.9245**	**0.0571**	**5.1000e-004**	**14.5073**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.05**	**1.87**	**0.10**	**0.00**	**0.00**	**4.17**	**0.08**	**0.00**	**4.35**	**0.29**	**0.00**	**14.84**	**13.88**	**0.30**	**3.77**	**12.61**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 16,457; Residential Outdoor: 5,486; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9300e-003	0.0330	0.0447	8.0000e-005		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	6.7825	6.7825	3.1000e-004	0.0000	6.7903
Total	**3.9300e-003**	**0.0330**	**0.0447**	**8.0000e-005**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**1.6200e-003**	**1.6200e-003**	**0.0000**	**6.7825**	**6.7825**	**3.1000e-004**	**0.0000**	**6.7903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3130	0.3130	1.0000e-005	1.0000e-005	0.3155
Total	**1.1000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3130**	**0.3130**	**1.0000e-005**	**1.0000e-005**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-004	3.4200e-003	0.0487	8.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.7825	6.7825	3.1000e-004	0.0000	6.7902
Total	**7.9000e-004**	**3.4200e-003**	**0.0487**	**8.0000e-005**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**6.7825**	**6.7825**	**3.1000e-004**	**0.0000**	**6.7902**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3130	0.3130	1.0000e-005	1.0000e-005	0.3155
Total	**1.1000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3130**	**0.3130**	**1.0000e-005**	**1.0000e-005**	**0.3155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.5000e-004	0.0000	6.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0210	0.1878	0.2403	3.9000e-004		9.1700e-003	9.1700e-003		8.7700e-003	8.7700e-003	0.0000	33.8590	33.8590	6.1600e-003	0.0000	34.0130
Total	**0.0210**	**0.1878**	**0.2403**	**3.9000e-004**	**6.5000e-004**	**9.1700e-003**	**9.8200e-003**	**1.0000e-004**	**8.7700e-003**	**8.8700e-003**	**0.0000**	**33.8590**	**33.8590**	**6.1600e-003**	**0.0000**	**34.0130**

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	1.0000e-005	3.8000e-004	1.0000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1711	0.1711	1.0000e-005	3.0000e-005	0.1795
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	1.0100e-003	7.8000e-004	0.0106	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.8254	2.8254	7.0000e-005	7.0000e-005	2.8486
Total	**1.0200e-003**	**1.1600e-003**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**2.9965**	**2.9965**	**8.0000e-005**	**1.0000e-004**	**3.0280**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3100e-003	0.0187	0.2552	3.9000e-004		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	33.8590	33.8590	6.1600e-003	0.0000	34.0130
Total	**4.3100e-003**	**0.0187**	**0.2552**	**3.9000e-004**	**2.9000e-004**	**5.7000e-004**	**8.6000e-004**	**4.0000e-005**	**5.7000e-004**	**6.1000e-004**	**0.0000**	**33.8590**	**33.8590**	**6.1600e-003**	**0.0000**	**34.0130**

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	1.0000e-005	3.8000e-004	1.0000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1711	0.1711	1.0000e-005	3.0000e-005	0.1795
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	1.0100e-003	7.8000e-004	0.0106	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.8254	2.8254	7.0000e-005	7.0000e-005	2.8486
Total	**1.0200e-003**	**1.1600e-003**	**0.0107**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.9000e-004**	**0.0000**	**2.9965**	**2.9965**	**8.0000e-005**	**1.0000e-004**	**3.0280**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1258	0.0000	0.1258	0.0575	0.0000	0.0575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0707	0.6402	0.4977	1.6200e-003		0.0246	0.0246		0.0227	0.0227	0.0000	142.2659	142.2659	0.0460	0.0000	143.4162
Total	**0.0707**	**0.6402**	**0.4977**	**1.6200e-003**	**0.1258**	**0.0246**	**0.1504**	**0.0575**	**0.0227**	**0.0801**	**0.0000**	**142.2659**	**142.2659**	**0.0460**	**0.0000**	**143.4162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0190	5.1100e-003	9.0000e-005	2.5800e-003	1.4000e-004	2.7200e-003	7.1000e-004	1.3000e-004	8.4000e-004	0.0000	8.5560	8.5560	4.7000e-004	1.3600e-003	8.9730
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	1.7200e-003	1.3200e-003	0.0180	5.0000e-005	6.0300e-003	3.0000e-005	6.0700e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.7814	4.7814	1.2000e-004	1.2000e-004	4.8207
Total	**2.0300e-003**	**0.0204**	**0.0231**	**1.4000e-004**	**8.6100e-003**	**1.7000e-004**	**8.7900e-003**	**2.3100e-003**	**1.6000e-004**	**2.4700e-003**	**0.0000**	**13.3374**	**13.3374**	**5.9000e-004**	**1.4800e-003**	**13.7936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0566	0.0000	0.0566	0.0259	0.0000	0.0259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0198	0.0860	0.7822	1.6200e-003		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	142.2657	142.2657	0.0460	0.0000	143.4160
Total	**0.0198**	**0.0860**	**0.7822**	**1.6200e-003**	**0.0566**	**2.6400e-003**	**0.0592**	**0.0259**	**2.6400e-003**	**0.0285**	**0.0000**	**142.2657**	**142.2657**	**0.0460**	**0.0000**	**143.4160**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0190	5.1100e-003	9.0000e-005	2.5800e-003	1.4000e-004	2.7200e-003	7.1000e-004	1.3000e-004	8.4000e-004	0.0000	8.5560	8.5560	4.7000e-004	1.3600e-003	8.9730
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	1.7200e-003	1.3200e-003	0.0180	5.0000e-005	6.0300e-003	3.0000e-005	6.0700e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.7814	4.7814	1.2000e-004	1.2000e-004	4.8207
Total	**2.0300e-003**	**0.0204**	**0.0231**	**1.4000e-004**	**8.6100e-003**	**1.7000e-004**	**8.7900e-003**	**2.3100e-003**	**1.6000e-004**	**2.4700e-003**	**0.0000**	**13.3374**	**13.3374**	**5.9000e-004**	**1.4800e-003**	**13.7936**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0857	0.5583	0.6849	1.1400e-003		0.0234	0.0234		0.0234	0.0234	0.0000	89.3530	89.3530	6.9300e-003	0.0000	89.5263
Total	**0.0857**	**0.5583**	**0.6849**	**1.1400e-003**		**0.0234**	**0.0234**		**0.0234**	**0.0234**	**0.0000**	**89.3530**	**89.3530**	**6.9300e-003**	**0.0000**	**89.5263**

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	1.6000e-004	5.7900e-003	2.2000e-003	3.0000e-005	9.6000e-004	3.0000e-005	9.9000e-004	2.8000e-004	3.0000e-005	3.1000e-004	0.0000	2.7052	2.7052	9.0000e-005	3.9000e-004	2.8242
Worker	9.5000e-004	7.3000e-004	9.9500e-003	3.0000e-005	3.3400e-003	2.0000e-005	3.3500e-003	8.9000e-004	2.0000e-005	9.0000e-004	0.0000	2.6428	2.6428	7.0000e-005	7.0000e-005	2.6645
Total	**1.1100e-003**	**6.5200e-003**	**0.0122**	**6.0000e-005**	**4.3000e-003**	**5.0000e-005**	**4.3400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2100e-003**	**0.0000**	**5.3480**	**5.3480**	**1.6000e-004**	**4.6000e-004**	**5.4888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.2506	0.6496	1.1400e-003		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	89.3529	89.3529	6.9300e-003	0.0000	89.5262
Total	**0.0150**	**0.2506**	**0.6496**	**1.1400e-003**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**	**0.0000**	**89.3529**	**89.3529**	**6.9300e-003**	**0.0000**	**89.5262**

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	1.6000e-004	5.7900e-003	2.2000e-003	3.0000e-005	9.6000e-004	3.0000e-005	9.9000e-004	2.8000e-004	3.0000e-005	3.1000e-004	0.0000	2.7052	2.7052	9.0000e-005	3.9000e-004	2.8242
Worker	9.5000e-004	7.3000e-004	9.9500e-003	3.0000e-005	3.3400e-003	2.0000e-005	3.3500e-003	8.9000e-004	2.0000e-005	9.0000e-004	0.0000	2.6428	2.6428	7.0000e-005	7.0000e-005	2.6645
Total	**1.1100e-003**	**6.5200e-003**	**0.0122**	**6.0000e-005**	**4.3000e-003**	**5.0000e-005**	**4.3400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2100e-003**	**0.0000**	**5.3480**	**5.3480**	**1.6000e-004**	**4.6000e-004**	**5.4888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1377	0.9242	1.1742	1.9600e-003		0.0350	0.0350		0.0350	0.0350	0.0000	154.0163	154.0163	0.0112	0.0000	154.2955
Total	**0.1377**	**0.9242**	**1.1742**	**1.9600e-003**		**0.0350**	**0.0350**		**0.0350**	**0.0350**	**0.0000**	**154.0163**	**154.0163**	**0.0112**	**0.0000**	**154.2955**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	0.0100	3.7400e-003	5.0000e-005	1.6500e-003	6.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	4.5958	4.5958	1.6000e-004	6.7000e-004	4.7985
Worker	1.5300e-003	1.1200e-003	0.0160	5.0000e-005	5.7500e-003	3.0000e-005	5.7800e-003	1.5300e-003	3.0000e-005	1.5600e-003	0.0000	4.4575	4.4575	1.0000e-004	1.1000e-004	4.4922
Total	**1.8100e-003**	**0.0112**	**0.0197**	**1.0000e-004**	**7.4000e-003**	**9.0000e-005**	**7.4900e-003**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**0.0000**	**9.0533**	**9.0533**	**2.6000e-004**	**7.8000e-004**	**9.2907**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0258	0.4319	1.1196	1.9600e-003		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	154.0161	154.0161	0.0112	0.0000	154.2954
Total	**0.0258**	**0.4319**	**1.1196**	**1.9600e-003**		**2.3000e-003**	**2.3000e-003**		**2.3000e-003**	**2.3000e-003**	**0.0000**	**154.0161**	**154.0161**	**0.0112**	**0.0000**	**154.2954**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-004	0.0100	3.7400e-003	5.0000e-005	1.6500e-003	6.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	4.5958	4.5958	1.6000e-004	6.7000e-004	4.7985
Worker	1.5300e-003	1.1200e-003	0.0160	5.0000e-005	5.7500e-003	3.0000e-005	5.7800e-003	1.5300e-003	3.0000e-005	1.5600e-003	0.0000	4.4575	4.4575	1.0000e-004	1.1000e-004	4.4922
Total	**1.8100e-003**	**0.0112**	**0.0197**	**1.0000e-004**	**7.4000e-003**	**9.0000e-005**	**7.4900e-003**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**0.0000**	**9.0533**	**9.0533**	**2.6000e-004**	**7.8000e-004**	**9.2907**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	4.9000e-004	3.3900e-003	4.4600e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.5879	0.5879	4.0000e-005	0.0000	0.5888
Total	**4.9000e-004**	**3.3900e-003**	**4.4600e-003**	**1.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.5879**	**0.5879**	**4.0000e-005**	**0.0000**	**0.5888**

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	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0172	0.0172	0.0000	0.0000	0.0180
Worker	1.0000e-005	0.0000	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0166	0.0166	0.0000	0.0000	0.0167
Total	**1.0000e-005**	**4.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0338**	**0.0338**	**0.0000**	**0.0000**	**0.0347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	1.0000e-004	1.6500e-003	4.2700e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.5879	0.5879	4.0000e-005	0.0000	0.5888
Total	**1.0000e-004**	**1.6500e-003**	**4.2700e-003**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.5879**	**0.5879**	**4.0000e-005**	**0.0000**	**0.5888**

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	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0172	0.0172	0.0000	0.0000	0.0180
Worker	1.0000e-005	0.0000	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0166	0.0166	0.0000	0.0000	0.0167
Total	**1.0000e-005**	**4.0000e-005**	**7.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0338**	**0.0338**	**0.0000**	**0.0000**	**0.0347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	3.5900e-003	0.0318	0.0610	1.0000e-004		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	8.6266	8.6266	2.7900e-003	0.0000	8.6964
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.6200e-003**	**0.0318**	**0.0610**	**1.0000e-004**		**1.5300e-003**	**1.5300e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**8.6266**	**8.6266**	**2.7900e-003**	**0.0000**	**8.6964**

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	1.6000e-004	1.2000e-004	1.7100e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5016
Total	**1.6000e-004**	**1.2000e-004**	**1.7100e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4979**	**0.4979**	**1.0000e-005**	**1.0000e-005**	**0.5016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	1.2100e-003	5.2400e-003	0.0746	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.6266	8.6266	2.7900e-003	0.0000	8.6964
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2400e-003**	**5.2400e-003**	**0.0746**	**1.0000e-004**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**8.6266**	**8.6266**	**2.7900e-003**	**0.0000**	**8.6964**

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	1.6000e-004	1.2000e-004	1.7100e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5016
Total	**1.6000e-004**	**1.2000e-004**	**1.7100e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4979**	**0.4979**	**1.0000e-005**	**1.0000e-005**	**0.5016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	0.0267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7900e-003	0.0120	0.0190	3.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	2.6809	2.6809	1.5000e-004	0.0000	2.6846
Total	**0.0285**	**0.0120**	**0.0190**	**3.0000e-005**		**5.4000e-004**	**5.4000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**2.6809**	**2.6809**	**1.5000e-004**	**0.0000**	**2.6846**

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	3.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0871	0.0871	0.0000	0.0000	0.0878
Total	**3.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0871**	**0.0871**	**0.0000**	**0.0000**	**0.0878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	0.0267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-004	1.3500e-003	0.0192	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.6809	2.6809	1.5000e-004	0.0000	2.6846
Total	**0.0270**	**1.3500e-003**	**0.0192**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.6809**	**2.6809**	**1.5000e-004**	**0.0000**	**2.6846**

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	3.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0871	0.0871	0.0000	0.0000	0.0878
Total	**3.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0871**	**0.0871**	**0.0000**	**0.0000**	**0.0878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536
Unmitigated	4.6200e-003	5.5400e-003	0.0479	1.1000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	7.0000e-005	3.2800e-003	0.0000	10.3053	10.3053	6.4000e-004	4.4000e-004	10.4536

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
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
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.9358	1.9358	1.6000e-004	2.0000e-005	1.9458
NaturalGas Mitigated	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
NaturalGas Unmitigated	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2753	1.2753	2.0000e-005	2.0000e-005	1.2829

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	23897.8	1.3000e-004	1.1000e-003	4.7000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2753	1.2753	2.0000e-005	2.0000e-005	1.2829
Total		**1.3000e-004**	**1.1000e-003**	**4.7000e-004**	**1.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**1.2753**	**1.2753**	**2.0000e-005**	**2.0000e-005**	**1.2829**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	21140.5	1.1000e-004	9.7000e-004	4.1000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1281	1.1281	2.0000e-005	2.0000e-005	1.1348
Total		**1.1000e-004**	**9.7000e-004**	**4.1000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1281**	**1.1281**	**2.0000e-005**	**2.0000e-005**	**1.1348**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	3097.5	0.5493	5.0000e-005	1.0000e-005	0.5522
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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	7818.09	1.3865	1.2000e-004	1.0000e-005	1.3937
Total		**1.9358**	**1.7000e-004**	**2.0000e-005**	**1.9458**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0330	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591
Unmitigated	0.0330	3.3000e-004	0.0105	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2573	0.2573	2.0000e-005	0.0000	0.2591

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	2.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.0000e-005	2.1000e-004	9.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	0.0000	0.0000	0.2416
Landscaping	3.2000e-004	1.2000e-004	0.0105	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0172	0.0172	2.0000e-005	0.0000	0.0176
Total	**0.0330**	**3.3000e-004**	**0.0106**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**2.0000e-005**	**0.0000**	**0.2591**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.0000e-005	2.1000e-004	9.0000e-005	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	0.0000	0.0000	0.2416
Landscaping	3.2000e-004	1.2000e-004	0.0105	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0172	0.0172	2.0000e-005	0.0000	0.0176
Total	**0.0330**	**3.3000e-004**	**0.0106**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**2.0000e-005**	**0.0000**	**0.2591**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2899	6.3000e-004	5.0000e-005	0.3213
Unmitigated	0.2899	6.3000e-004	5.0000e-005	0.3213

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0 / 0.017988	0.0354	0.0000	0.0000	0.0356
Single Family Housing	0.065154 / 0.0410754	0.2544	6.2000e-004	5.0000e-005	0.2856
Total		**0.2899**	**6.2000e-004**	**5.0000e-005**	**0.3213**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	0 / 0.017988	0.0354	0.0000	0.0000	0.0356
Single Family Housing	0.065154 / 0.0410754	0.2544	6.2000e-004	5.0000e-005	0.2856
Total		**0.2899**	**6.2000e-004**	**5.0000e-005**	**0.3213**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9439	0.0558	0.0000	2.3385
Unmitigated	0.9439	0.0558	0.0000	2.3385

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Single Family Housing	1.23	0.2497	0.0148	0.0000	0.6186
Total		**0.9439**	**0.0558**	**0.0000**	**2.3385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
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
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Single Family Housing	1.23	0.2497	0.0148	0.0000	0.6186
Total		**0.9439**	**0.0558**	**0.0000**	**2.3385**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG - Mitigated

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,127.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Implemented Tier 4 final mitigation

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	21.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	1.00	24.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00
tblLandUse	LandUseSquareFeet	1,800.00	8,127.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	5.1288	43.2120	40.6629	0.1087	6.3054	1.7182	8.0235	2.7679	1.6159	4.3837	0.0000	10,436.9127	10,436.9127	2.6497	0.0835	10,528.0354
2024	1.0654	7.1356	9.1227	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,373.8441	1,373.8441	0.0962	6.4400e-003	1,378.1687
2025	3.0303	9.5278	14.3065	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,212.4379	2,212.4379	0.3468	7.2800e-003	2,223.2763
Maximum	**5.1288**	**43.2120**	**40.6629**	**0.1087**	**6.3054**	**1.7182**	**8.0235**	**2.7679**	**1.6159**	**4.3837**	**0.0000**	**10,436.9127**	**10,436.9127**	**2.6497**	**0.0835**	**10,528.0354**

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					
2023	1.3732	8.7677	53.5872	0.1087	3.1507	0.1646	3.3153	1.3294	0.1641	1.4935	0.0000	10,436.9127	10,436.9127	2.6497	0.0835	10,528.0354
2024	0.2113	3.3776	8.7063	0.0157	0.0575	0.0182	0.0757	0.0156	0.0182	0.0337	0.0000	1,373.8441	1,373.8441	0.0962	6.4400e-003	1,378.1687
2025	2.6911	3.8221	15.0689	0.0243	0.1134	0.0319	0.1453	0.0304	0.0319	0.0622	0.0000	2,212.4379	2,212.4379	0.3468	7.2800e-003	2,223.2763
Maximum	**2.6911**	**8.7677**	**53.5872**	**0.1087**	**3.1507**	**0.1646**	**3.3153**	**1.3294**	**0.1641**	**1.4935**	**0.0000**	**10,436.9127**	**10,436.9127**	**2.6497**	**0.0835**	**10,528.0354**

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**53.65**	**73.33**	**-20.71**	**0.00**	**48.71**	**90.85**	**59.92**	**51.12**	**90.42**	**68.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Mobile	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Total	**0.2113**	**0.0522**	**0.3687**	**7.8000e-004**	**0.0687**	**2.7400e-003**	**0.0714**	**0.0183**	**2.7100e-003**	**0.0210**	**0.0000**	**95.2546**	**95.2546**	**4.6100e-003**	**3.1600e-003**	**96.3115**

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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Mobile	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Total	**0.2112**	**0.0515**	**0.3684**	**7.7000e-004**	**0.0687**	**2.6800e-003**	**0.0714**	**0.0183**	**2.6500e-003**	**0.0210**	**0.0000**	**94.3659**	**94.3659**	**4.5900e-003**	**3.1400e-003**	**95.4175**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**1.32**	**0.08**	**1.28**	**0.00**	**2.19**	**0.08**	**0.00**	**2.21**	**0.29**	**0.00**	**0.93**	**0.93**	**0.43**	**0.63**	**0.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	
4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 16,457; Residential Outdoor: 5,486; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349		623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**		**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	9.5800e-003	6.4300e-003	0.1055	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		30.0600	30.0600	7.2000e-004	6.8000e-004	30.2800
Total	**9.5800e-003**	**6.4300e-003**	**0.1055**	**2.9000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**30.0600**	**30.0600**	**7.2000e-004**	**6.8000e-004**	**30.2800**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0658	0.2850	4.0564	6.5800e-003		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	623.0346	623.0346	0.0285		623.7472
Total	**0.0658**	**0.2850**	**4.0564**	**6.5800e-003**	**0.0000**	**8.7700e-003**	**8.7700e-003**	**0.0000**	**8.7700e-003**	**8.7700e-003**	**0.0000**	**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	9.5800e-003	6.4300e-003	0.1055	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		30.0600	30.0600	7.2000e-004	6.8000e-004	30.2800
Total	**9.5800e-003**	**6.4300e-003**	**0.1055**	**2.9000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**30.0600**	**30.0600**	**7.2000e-004**	**6.8000e-004**	**30.2800**

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0200	0.0000	0.0200	3.0200e-003	0.0000	3.0200e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0200**	**0.2821**	**0.3021**	**3.0200e-003**	**0.2698**	**0.2728**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	2.0000e-004	0.0111	3.1300e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8012	5.8012	3.2000e-004	9.2000e-004	6.0839
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
Worker	0.0319	0.0214	0.3517	9.8000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		100.1999	100.1999	2.4000e-003	2.2600e-003	100.9334
Total	**0.0321**	**0.0326**	**0.3549**	**1.0300e-003**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**106.0011**	**106.0011**	**2.7200e-003**	**3.1800e-003**	**107.0173**

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					8.9800e-003	0.0000	8.9800e-003	1.3600e-003	0.0000	1.3600e-003			0.0000			0.0000
Off-Road	0.1326	0.5747	7.8509	0.0120		0.0177	0.0177		0.0177	0.0177	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.1326**	**0.5747**	**7.8509**	**0.0120**	**8.9800e-003**	**0.0177**	**0.0267**	**1.3600e-003**	**0.0177**	**0.0190**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	2.0000e-004	0.0111	3.1300e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8012	5.8012	3.2000e-004	9.2000e-004	6.0839
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
Worker	0.0319	0.0214	0.3517	9.8000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		100.1999	100.1999	2.4000e-003	2.2600e-003	100.9334
Total	**0.0321**	**0.0326**	**0.3549**	**1.0300e-003**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**106.0011**	**106.0011**	**2.7200e-003**	**3.1800e-003**	**107.0173**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7158	0.0000	5.7158	2.6124	0.0000	2.6124			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294		7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**5.7158**	**1.1189**	**6.8347**	**2.6124**	**1.0294**	**3.6418**		**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0147	0.8213	0.2310	3.9000e-003	0.1193	6.2200e-003	0.1255	0.0327	5.9500e-003	0.0386		428.4958	428.4958	0.0238	0.0681	449.3778
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
Worker	0.0799	0.0536	0.8793	2.4500e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		250.4998	250.4998	6.0000e-003	5.6500e-003	252.3336
Total	**0.0946**	**0.8749**	**1.1103**	**6.3500e-003**	**0.3987**	**7.7900e-003**	**0.4065**	**0.1068**	**7.4000e-003**	**0.1142**		**678.9956**	**678.9956**	**0.0298**	**0.0737**	**701.7114**

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					2.5721	0.0000	2.5721	1.1756	0.0000	1.1756			0.0000			0.0000
Off-Road	0.9017	3.9074	35.5549	0.0736		0.1202	0.1202		0.1202	0.1202	0.0000	7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**0.9017**	**3.9074**	**35.5549**	**0.0736**	**2.5721**	**0.1202**	**2.6923**	**1.1756**	**0.1202**	**1.2958**	**0.0000**	**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0147	0.8213	0.2310	3.9000e-003	0.1193	6.2200e-003	0.1255	0.0327	5.9500e-003	0.0386		428.4958	428.4958	0.0238	0.0681	449.3778
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
Worker	0.0799	0.0536	0.8793	2.4500e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		250.4998	250.4998	6.0000e-003	5.6500e-003	252.3336
Total	**0.0946**	**0.8749**	**1.1103**	**6.3500e-003**	**0.3987**	**7.7900e-003**	**0.4065**	**0.1068**	**7.4000e-003**	**0.1142**		**678.9956**	**678.9956**	**0.0298**	**0.0737**	**701.7114**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080		1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**		**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.2100e-003	0.0726	0.0286	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.0000e-004	4.0900e-003		39.2062	39.2062	1.3200e-003	5.6800e-003	40.9305
Worker	0.0128	8.5800e-003	0.1407	3.9000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		40.0800	40.0800	9.6000e-004	9.0000e-004	40.3734
Total	**0.0150**	**0.0812**	**0.1693**	**7.5000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**79.2862**	**79.2862**	**2.2800e-003**	**6.5800e-003**	**81.3039**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.2100e-003	0.0726	0.0286	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.0000e-004	4.0900e-003		39.2062	39.2062	1.3200e-003	5.6800e-003	40.9305
Worker	0.0128	8.5800e-003	0.1407	3.9000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		40.0800	40.0800	9.6000e-004	9.0000e-004	40.3734
Total	**0.0150**	**0.0812**	**0.1693**	**7.5000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**79.2862**	**79.2862**	**2.2800e-003**	**6.5800e-003**	**81.3039**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674		1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**		**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.1600e-003	0.0729	0.0281	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.6422	38.6422	1.3200e-003	5.6000e-003	40.3446
Worker	0.0119	7.6700e-003	0.1313	3.8000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		39.2178	39.2178	8.7000e-004	8.4000e-004	39.4904
Total	**0.0141**	**0.0806**	**0.1594**	**7.4000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**77.8600**	**77.8600**	**2.1900e-003**	**6.4400e-003**	**79.8350**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.1600e-003	0.0729	0.0281	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.6422	38.6422	1.3200e-003	5.6000e-003	40.3446
Worker	0.0119	7.6700e-003	0.1313	3.8000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		39.2178	39.2178	8.7000e-004	8.4000e-004	39.4904
Total	**0.0141**	**0.0806**	**0.1594**	**7.4000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**77.8600**	**77.8600**	**2.1900e-003**	**6.4400e-003**	**79.8350**

3.5 Building Construction - 2025

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324		1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**		**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.1100e-003	0.0726	0.0277	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		37.9379	37.9379	1.3200e-003	5.5100e-003	39.6119
Worker	0.0112	6.8900e-003	0.1225	3.7000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		38.2576	38.2576	7.8000e-004	7.9000e-004	38.5117
Total	**0.0133**	**0.0795**	**0.1502**	**7.2000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**76.1954**	**76.1954**	**2.1000e-003**	**6.3000e-003**	**78.1236**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.1100e-003	0.0726	0.0277	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		37.9379	37.9379	1.3200e-003	5.5100e-003	39.6119
Worker	0.0112	6.8900e-003	0.1225	3.7000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		38.2576	38.2576	7.8000e-004	7.9000e-004	38.5117
Total	**0.0133**	**0.0795**	**0.1502**	**7.2000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**76.1954**	**76.1954**	**2.1000e-003**	**6.3000e-003**	**78.1236**

3.6 Paving - 2025

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172		792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**		**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0140	8.6200e-003	0.1532	4.6000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		47.8219	47.8219	9.8000e-004	9.8000e-004	48.1396
Total	**0.0140**	**8.6200e-003**	**0.1532**	**4.6000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**47.8219**	**47.8219**	**9.8000e-004**	**9.8000e-004**	**48.1396**

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	0.1008	0.4370	6.2187	8.1900e-003		0.0135	0.0135		0.0135	0.0135	0.0000	792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1030**	**0.4370**	**6.2187**	**8.1900e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0140	8.6200e-003	0.1532	4.6000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		47.8219	47.8219	9.8000e-004	9.8000e-004	48.1396
Total	**0.0140**	**8.6200e-003**	**0.1532**	**4.6000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**47.8219**	**47.8219**	**9.8000e-004**	**9.8000e-004**	**48.1396**

3.7 Architectural Coating - 2025

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	2.5416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**2.7125**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.7900e-003	1.7200e-003	0.0306	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.5644	9.5644	2.0000e-004	2.0000e-004	9.6279
Total	**2.7900e-003**	**1.7200e-003**	**0.0306**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.5644**	**9.5644**	**2.0000e-004**	**2.0000e-004**	**9.6279**

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	2.5416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**2.5714**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.7900e-003	1.7200e-003	0.0306	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.5644	9.5644	2.0000e-004	2.0000e-004	9.6279
Total	**2.7900e-003**	**1.7200e-003**	**0.0306**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.5644**	**9.5644**	**2.0000e-004**	**2.0000e-004**	**9.6279**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058
Unmitigated	0.0273	0.0286	0.2755	6.3000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		66.2242	66.2242	3.9000e-003	2.6300e-003	67.1058

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
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
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
NaturalGas Unmitigated	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	65.4733	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Total		**7.1000e-004**	**6.0300e-003**	**2.5700e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**		**7.7027**	**7.7027**	**1.5000e-004**	**1.4000e-004**	**7.7485**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	0.0579191	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Total		**6.2000e-004**	**5.3400e-003**	**2.2700e-003**	**3.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**6.8140**	**6.8140**	**1.3000e-004**	**1.2000e-004**	**6.8545**

6.0 Area Detail

6.1 Mitigation Measures Area

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Unmitigated	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572

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	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1641					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1833**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1641					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1833**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

32501 Coast Highway - AQGHG - Mitigated

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3.00	Space	0.03	590.00	0
Other Asphalt Surfaces	0.91	1000sqft	0.02	910.00	0
Other Non-Asphalt Surfaces	7.57	1000sqft	0.17	7,570.00	0
Recreational Swimming Pool	0.60	1000sqft	0.01	597.00	0
Single Family Housing	1.00	Dwelling Unit	0.10	8,127.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by the applicant. Other Asphalt = 910 sf Pervious Surface; Other Non-Asphalt = Landscaped Open Space; Recreational Swimming Pool = dimensions of swimming pool and Jacuzzi. Single-family Housing = 4,137 sf lot area = 0.1 acres.

Construction Phase - Construction Schedule based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Default construction equipment was used.

Off-road Equipment - Construction equipment based on applicant provided information.

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Construction equipment based on applicant provided information

Off-road Equipment - Construction equipment based on applicant provided information

Trips and VMT -

Demolition - Data based on applicant provided information

Grading - Based on applicant data

Architectural Coating -

Vehicle Trips - Backyard swimming pool would not add additional vehicle trips

Woodstoves - Based on applicant provided information

Area Coating -

Water And Wastewater - Pool/Spa/Water Features gallons of water provided by the applicant. The project would not include a septic tank.

Construction Off-road Equipment Mitigation - Implemented Tier 4 final mitigation

Energy Mitigation - Based on applicant provided information and Title 24 Building Energy Efficiency Standards.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	24.00
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	100.00	415.00
tblConstructionPhase	NumDays	5.00	24.00
tblConstructionPhase	NumDays	5.00	21.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	0.85	1.00
tblFireplaces	NumberNoFireplace	0.10	0.00
tblFireplaces	NumberWood	0.05	0.00
tblGrading	MaterialExported	0.00	2,400.00
tblLandUse	LandUseSquareFeet	1,200.00	590.00
tblLandUse	LandUseSquareFeet	600.00	597.00
tblLandUse	LandUseSquareFeet	1,800.00	8,127.00
tblLandUse	LotAcreage	0.32	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	28.82	0.00
tblWater	AerobicPercent	87.46	97.79
tblWater	AerobicPercent	87.46	97.79
tblWater	IndoorWaterUseRate	35,485.89	0.00
tblWater	OutdoorWaterUseRate	21,749.41	17,988.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	0.05	0.00
tblWoodstoves	NumberNoncatalytic	0.05	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	5.1346	43.2631	40.5368	0.1085	6.3054	1.7182	8.0235	2.7679	1.6159	4.3837	0.0000	10,414.7942	10,414.7942	2.6498	0.0841	10,506.1061
2024	1.0660	7.1399	9.1112	0.0157	0.0575	0.2681	0.3256	0.0156	0.2681	0.2836	0.0000	1,371.6405	1,371.6405	0.0962	6.5100e-003	1,375.9848
2025	3.0314	9.5329	14.2814	0.0243	0.1134	0.3607	0.4741	0.0304	0.3505	0.3808	0.0000	2,207.5226	2,207.5226	0.3468	7.3900e-003	2,218.3975
Maximum	**5.1346**	**43.2631**	**40.5368**	**0.1085**	**6.3054**	**1.7182**	**8.0235**	**2.7679**	**1.6159**	**4.3837**	**0.0000**	**10,414.7942**	**10,414.7942**	**2.6498**	**0.0841**	**10,506.1061**

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					
2023	1.3791	8.8188	53.4612	0.1085	3.1507	0.1646	3.3153	1.3294	0.1642	1.4935	0.0000	10,414.7942	10,414.7942	2.6498	0.0841	10,506.1061
2024	0.2119	3.3819	8.6948	0.0157	0.0575	0.0182	0.0757	0.0156	0.0182	0.0337	0.0000	1,371.6405	1,371.6405	0.0962	6.5100e-003	1,375.9848
2025	2.6922	3.8271	15.0439	0.0243	0.1134	0.0319	0.1453	0.0304	0.0319	0.0622	0.0000	2,207.5226	2,207.5226	0.3468	7.3900e-003	2,218.3975
Maximum	**2.6922**	**8.8188**	**53.4612**	**0.1085**	**3.1507**	**0.1646**	**3.3153**	**1.3294**	**0.1642**	**1.4935**	**0.0000**	**10,414.7942**	**10,414.7942**	**2.6498**	**0.0841**	**10,506.1061**

32501 Coast Highway - AQGHG - Mitigated - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**53.61**	**73.26**	**-20.76**	**0.00**	**48.71**	**90.85**	**59.92**	**51.12**	**90.41**	**68.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Mobile	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Total	**0.2103**	**0.0543**	**0.3594**	**7.5000e-004**	**0.0687**	**2.7400e-003**	**0.0714**	**0.0183**	**2.7100e-003**	**0.0210**	**0.0000**	**92.1896**	**92.1896**	**4.7200e-003**	**3.2600e-003**	**93.2792**

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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Energy	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Mobile	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Total	**0.2102**	**0.0537**	**0.3591**	**7.4000e-004**	**0.0687**	**2.6800e-003**	**0.0714**	**0.0183**	**2.6500e-003**	**0.0210**	**0.0000**	**91.3009**	**91.3009**	**4.7000e-003**	**3.2400e-003**	**92.3852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**1.27**	**0.08**	**1.33**	**0.00**	**2.19**	**0.08**	**0.00**	**2.21**	**0.29**	**0.00**	**0.96**	**0.96**	**0.42**	**0.61**	**0.96**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2023	4/3/2023	5	24	
2	Demolition	Demolition	4/3/2023	6/30/2023	5	65	
3	Grading	Grading	4/3/2023	6/1/2023	5	44	
4	Building Construction	Building Construction	6/1/2023	1/1/2025	5	415	
5	Paving	Paving	1/1/2025	2/3/2025	5	24	
6	Architectural Coating	Architectural Coating	2/3/2025	3/3/2025	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 49.5

Acres of Paving: 0.22

Residential Indoor: 16,457; Residential Outdoor: 5,486; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Pumps	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	2	6.00	187	0.41
Grading	Off-Highway Trucks	3	8.00	402	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	25.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3278	2.7529	3.7253	6.5800e-003		0.1349	0.1349		0.1349	0.1349		623.0346	623.0346	0.0285		623.7472
Total	**0.3278**	**2.7529**	**3.7253**	**6.5800e-003**	**0.0000**	**0.1349**	**0.1349**	**0.0000**	**0.1349**	**0.1349**		**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	0.0101	7.0300e-003	0.0955	2.8000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		28.3155	28.3155	7.3000e-004	7.2000e-004	28.5480
Total	**0.0101**	**7.0300e-003**	**0.0955**	**2.8000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**28.3155**	**28.3155**	**7.3000e-004**	**7.2000e-004**	**28.5480**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0658	0.2850	4.0564	6.5800e-003		8.7700e-003	8.7700e-003		8.7700e-003	8.7700e-003	0.0000	623.0346	623.0346	0.0285		623.7472
Total	**0.0658**	**0.2850**	**4.0564**	**6.5800e-003**	**0.0000**	**8.7700e-003**	**8.7700e-003**	**0.0000**	**8.7700e-003**	**8.7700e-003**	**0.0000**	**623.0346**	**623.0346**	**0.0285**		**623.7472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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	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
Worker	0.0101	7.0300e-003	0.0955	2.8000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.7000e-004	9.0700e-003		28.3155	28.3155	7.3000e-004	7.2000e-004	28.5480
Total	**0.0101**	**7.0300e-003**	**0.0955**	**2.8000e-004**	**0.0335**	**1.9000e-004**	**0.0337**	**8.8900e-003**	**1.7000e-004**	**9.0700e-003**		**28.3155**	**28.3155**	**7.3000e-004**	**7.2000e-004**	**28.5480**

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0200	0.0000	0.0200	3.0200e-003	0.0000	3.0200e-003			0.0000			0.0000
Off-Road	0.6463	5.7787	7.3926	0.0120		0.2821	0.2821		0.2698	0.2698		1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.6463**	**5.7787**	**7.3926**	**0.0120**	**0.0200**	**0.2821**	**0.3021**	**3.0200e-003**	**0.2698**	**0.2728**		**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	1.9000e-004	0.0117	3.1700e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8077	5.8077	3.2000e-004	9.2000e-004	6.0907
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
Worker	0.0337	0.0235	0.3183	9.2000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		94.3849	94.3849	2.4300e-003	2.4000e-003	95.1601
Total	**0.0339**	**0.0351**	**0.3215**	**9.7000e-004**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**100.1926**	**100.1926**	**2.7500e-003**	**3.3200e-003**	**101.2508**

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					8.9800e-003	0.0000	8.9800e-003	1.3600e-003	0.0000	1.3600e-003			0.0000			0.0000
Off-Road	0.1326	0.5747	7.8509	0.0120		0.0177	0.0177		0.0177	0.0177	0.0000	1,148.4055	1,148.4055	0.2089		1,153.6290
Total	**0.1326**	**0.5747**	**7.8509**	**0.0120**	**8.9800e-003**	**0.0177**	**0.0267**	**1.3600e-003**	**0.0177**	**0.0190**	**0.0000**	**1,148.4055**	**1,148.4055**	**0.2089**		**1,153.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Demolition - 2023

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	1.9000e-004	0.0117	3.1700e-003	5.0000e-005	1.6100e-003	8.0000e-005	1.7000e-003	4.4000e-004	8.0000e-005	5.2000e-004		5.8077	5.8077	3.2000e-004	9.2000e-004	6.0907
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
Worker	0.0337	0.0235	0.3183	9.2000e-004	0.1118	6.3000e-004	0.1124	0.0296	5.8000e-004	0.0302		94.3849	94.3849	2.4300e-003	2.4000e-003	95.1601
Total	**0.0339**	**0.0351**	**0.3215**	**9.7000e-004**	**0.1134**	**7.1000e-004**	**0.1141**	**0.0301**	**6.6000e-004**	**0.0307**		**100.1926**	**100.1926**	**2.7500e-003**	**3.3200e-003**	**101.2508**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7158	0.0000	5.7158	2.6124	0.0000	2.6124			0.0000			0.0000
Off-Road	3.2127	29.0993	22.6243	0.0736		1.1189	1.1189		1.0294	1.0294		7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**3.2127**	**29.0993**	**22.6243**	**0.0736**	**5.7158**	**1.1189**	**6.8347**	**2.6124**	**1.0294**	**3.6418**		**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0137	0.8605	0.2344	3.9000e-003	0.1193	6.2400e-003	0.1255	0.0327	5.9700e-003	0.0387		428.9784	428.9784	0.0238	0.0682	449.8823
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
Worker	0.0843	0.0586	0.7958	2.3100e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		235.9622	235.9622	6.0800e-003	5.9900e-003	237.9003
Total	**0.0980**	**0.9191**	**1.0301**	**6.2100e-003**	**0.3987**	**7.8100e-003**	**0.4065**	**0.1068**	**7.4200e-003**	**0.1142**		**664.9407**	**664.9407**	**0.0299**	**0.0741**	**687.7826**

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					2.5721	0.0000	2.5721	1.1756	0.0000	1.1756			0.0000			0.0000
Off-Road	0.9017	3.9074	35.5549	0.0736		0.1202	0.1202		0.1202	0.1202	0.0000	7,128.2403	7,128.2403	2.3054		7,185.8758
Total	**0.9017**	**3.9074**	**35.5549**	**0.0736**	**2.5721**	**0.1202**	**2.6923**	**1.1756**	**0.1202**	**1.2958**	**0.0000**	**7,128.2403**	**7,128.2403**	**2.3054**		**7,185.8758**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

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	0.0137	0.8605	0.2344	3.9000e-003	0.1193	6.2400e-003	0.1255	0.0327	5.9700e-003	0.0387		428.9784	428.9784	0.0238	0.0682	449.8823
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
Worker	0.0843	0.0586	0.7958	2.3100e-003	0.2794	1.5700e-003	0.2810	0.0741	1.4500e-003	0.0756		235.9622	235.9622	6.0800e-003	5.9900e-003	237.9003
Total	**0.0980**	**0.9191**	**1.0301**	**6.2100e-003**	**0.3987**	**7.8100e-003**	**0.4065**	**0.1068**	**7.4200e-003**	**0.1142**		**664.9407**	**664.9407**	**0.0299**	**0.0741**	**687.7826**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1280	7.3454	9.0115	0.0150		0.3080	0.3080		0.3080	0.3080		1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**1.1280**	**7.3454**	**9.0115**	**0.0150**		**0.3080**	**0.3080**		**0.3080**	**0.3080**		**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.1200e-003	0.0762	0.0295	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		39.2771	39.2771	1.3100e-003	5.6900e-003	41.0058
Worker	0.0135	9.3800e-003	0.1273	3.7000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		37.7540	37.7540	9.7000e-004	9.6000e-004	38.0641
Total	**0.0156**	**0.0856**	**0.1568**	**7.3000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.4000e-004**	**0.0162**		**77.0310**	**77.0310**	**2.2800e-003**	**6.6500e-003**	**79.0698**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.1006		1,298.4980
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.1006**		**1,298.4980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0000
Vendor	2.1200e-003	0.0762	0.0295	3.6000e-004	0.0128	4.2000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		39.2771	39.2771	1.3100e-003	5.6900e-003	41.0058
Worker	0.0135	9.3800e-003	0.1273	3.7000e-004	0.0447	2.5000e-004	0.0450	0.0119	2.3000e-004	0.0121		37.7540	37.7540	9.7000e-004	9.6000e-004	38.0641
Total	**0.0156**	**0.0856**	**0.1568**	**7.3000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.4000e-004**	**0.0162**		**77.0310**	**77.0310**	**2.2800e-003**	**6.6500e-003**	**79.0698**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0513	7.0550	8.9633	0.0150		0.2674	0.2674		0.2674	0.2674		1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**1.0513**	**7.0550**	**8.9633**	**0.0150**		**0.2674**	**0.2674**		**0.2674**	**0.2674**		**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.0600e-003	0.0766	0.0290	3.6000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.7132	38.7132	1.3100e-003	5.6200e-003	40.4199
Worker	0.0126	8.3800e-003	0.1188	3.6000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		36.9432	36.9432	8.8000e-004	8.9000e-004	37.2312
Total	**0.0147**	**0.0849**	**0.1479**	**7.2000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**75.6564**	**75.6564**	**2.1900e-003**	**6.5100e-003**	**77.6512**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.0940		1,298.3337
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0940**		**1,298.3337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

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	0.0000
Vendor	2.0600e-003	0.0766	0.0290	3.6000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.0900e-003		38.7132	38.7132	1.3100e-003	5.6200e-003	40.4199
Worker	0.0126	8.3800e-003	0.1188	3.6000e-004	0.0447	2.4000e-004	0.0450	0.0119	2.2000e-004	0.0121		36.9432	36.9432	8.8000e-004	8.9000e-004	37.2312
Total	**0.0147**	**0.0849**	**0.1479**	**7.2000e-004**	**0.0575**	**6.7000e-004**	**0.0582**	**0.0156**	**6.3000e-004**	**0.0162**		**75.6564**	**75.6564**	**2.1900e-003**	**6.5100e-003**	**77.6512**

3.5 Building Construction - 2025

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	0.9845	6.7898	8.9228	0.0150		0.2324	0.2324		0.2324	0.2324		1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.9845**	**6.7898**	**8.9228**	**0.0150**		**0.2324**	**0.2324**		**0.2324**	**0.2324**		**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.0100e-003	0.0762	0.0286	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.1000e-003		38.0086	38.0086	1.3200e-003	5.5200e-003	39.6868
Worker	0.0119	7.5300e-003	0.1110	3.5000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		36.0415	36.0415	8.0000e-004	8.3000e-004	36.3101
Total	**0.0139**	**0.0837**	**0.1396**	**7.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**74.0501**	**74.0501**	**2.1200e-003**	**6.3500e-003**	**75.9969**

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	0.1972	3.2970	8.5469	0.0150		0.0175	0.0175		0.0175	0.0175	0.0000	1,295.9841	1,295.9841	0.0874		1,298.1693
Total	**0.1972**	**3.2970**	**8.5469**	**0.0150**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**1,295.9841**	**1,295.9841**	**0.0874**		**1,298.1693**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

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	0.0000
Vendor	2.0100e-003	0.0762	0.0286	3.5000e-004	0.0128	4.3000e-004	0.0132	3.6900e-003	4.1000e-004	4.1000e-003		38.0086	38.0086	1.3200e-003	5.5200e-003	39.6868
Worker	0.0119	7.5300e-003	0.1110	3.5000e-004	0.0447	2.3000e-004	0.0449	0.0119	2.1000e-004	0.0121		36.0415	36.0415	8.0000e-004	8.3000e-004	36.3101
Total	**0.0139**	**0.0837**	**0.1396**	**7.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0156**	**6.2000e-004**	**0.0162**		**74.0501**	**74.0501**	**2.1200e-003**	**6.3500e-003**	**75.9969**

3.6 Paving - 2025

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	0.2989	2.6499	5.0803	8.1900e-003		0.1274	0.1274		0.1172	0.1172		792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3011**	**2.6499**	**5.0803**	**8.1900e-003**		**0.1274**	**0.1274**		**0.1172**	**0.1172**		**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0148	9.4200e-003	0.1388	4.3000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		45.0519	45.0519	1.0000e-003	1.0400e-003	45.3876
Total	**0.0148**	**9.4200e-003**	**0.1388**	**4.3000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**45.0519**	**45.0519**	**1.0000e-003**	**1.0400e-003**	**45.3876**

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	0.1008	0.4370	6.2187	8.1900e-003		0.0135	0.0135		0.0135	0.0135	0.0000	792.4365	792.4365	0.2563		798.8437
Paving	2.1800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1030**	**0.4370**	**6.2187**	**8.1900e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**792.4365**	**792.4365**	**0.2563**		**798.8437**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

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	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
Worker	0.0148	9.4200e-003	0.1388	4.3000e-004	0.0559	2.9000e-004	0.0562	0.0148	2.6000e-004	0.0151		45.0519	45.0519	1.0000e-003	1.0400e-003	45.3876
Total	**0.0148**	**9.4200e-003**	**0.1388**	**4.3000e-004**	**0.0559**	**2.9000e-004**	**0.0562**	**0.0148**	**2.6000e-004**	**0.0151**		**45.0519**	**45.0519**	**1.0000e-003**	**1.0400e-003**	**45.3876**

3.7 Architectural Coating - 2025

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	2.5416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**2.7125**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.9700e-003	1.8800e-003	0.0278	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.0104	9.0104	2.0000e-004	2.1000e-004	9.0775
Total	**2.9700e-003**	**1.8800e-003**	**0.0278**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.0104**	**9.0104**	**2.0000e-004**	**2.1000e-004**	**9.0775**

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	2.5416					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**2.5714**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

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	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
Worker	2.9700e-003	1.8800e-003	0.0278	9.0000e-005	0.0112	6.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0200e-003		9.0104	9.0104	2.0000e-004	2.1000e-004	9.0775
Total	**2.9700e-003**	**1.8800e-003**	**0.0278**	**9.0000e-005**	**0.0112**	**6.0000e-005**	**0.0112**	**2.9600e-003**	**5.0000e-005**	**3.0200e-003**		**9.0104**	**9.0104**	**2.0000e-004**	**2.1000e-004**	**9.0775**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734
Unmitigated	0.0263	0.0308	0.2661	6.0000e-004	0.0687	4.5000e-004	0.0691	0.0183	4.2000e-004	0.0187		63.1592	63.1592	4.0100e-003	2.7300e-003	64.0734

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking Structure	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Single Family Housing	9.44	9.54	8.55	31,872	31,872
Total	9.44	9.54	8.55	31,872	31,872

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
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
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking Structure	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Other Non-Asphalt Surfaces	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Recreational Swimming Pool	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657
Single Family Housing	0.541709	0.062136	0.185590	0.128486	0.023783	0.006533	0.012157	0.009216	0.000814	0.000497	0.024669	0.000753	0.003657

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
NaturalGas Unmitigated	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	65.4733	7.1000e-004	6.0300e-003	2.5700e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004		7.7027	7.7027	1.5000e-004	1.4000e-004	7.7485
Total		**7.1000e-004**	**6.0300e-003**	**2.5700e-003**	**4.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**		**7.7027**	**7.7027**	**1.5000e-004**	**1.4000e-004**	**7.7485**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking Structure	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 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
Recreational Swimming Pool	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
Single Family Housing	0.0579191	6.2000e-004	5.3400e-003	2.2700e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.8140	6.8140	1.3000e-004	1.2000e-004	6.8545
Total		**6.2000e-004**	**5.3400e-003**	**2.2700e-003**	**3.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**		**6.8140**	**6.8140**	**1.3000e-004**	**1.2000e-004**	**6.8545**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572
Unmitigated	0.1833	0.0176	0.0907	1.1000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	21.3277	21.3277	5.6000e-004	3.9000e-004	21.4572

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	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1641					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1833**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1641					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9400e-003	0.0166	7.0600e-003	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	21.1765	21.1765	4.1000e-004	3.9000e-004	21.3023
Landscaping	2.5900e-003	9.6000e-004	0.0837	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1512	0.1512	1.5000e-004		0.1549
Total	**0.1833**	**0.0176**	**0.0907**	**1.1000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**21.3277**	**21.3277**	**5.6000e-004**	**3.9000e-004**	**21.4572**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Resources Assessment

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

January 24, 2023

Chuck Le and Christine Chung
Property Owners
32051 Coast Hwy
Laguna Beach, CA 92651

Subject: Updated Biological Resources Assessment for 32051 Coast Highway, City of Laguna Beach, Orange County, California

Dear Mr. Le and Ms. Chung:

LSA Associates, Inc. (LSA) has prepared this updated Biological Resources Assessment for a proposed single-family residential construction project (project) located at 32051 Coast Highway in Laguna Beach, California (refer to Figure 1, Project Location; all figures are provided in Attachment A). The purpose of this letter report is to describe and document biological resources—including sensitive and special-status species—known to occur or with the potential to occur on the proposed project site. This technical information is provided for project planning purposes and review under the California Environmental Quality Act (CEQA), California Endangered Species Act (CESA), the Federal Endangered Species Act (FESA), and other pertinent regulations. This letter report was originally prepared by LSA in October 2019 and has been updated to reflect comments received by Rincon Consultants, Inc. (Rincon) in August 2022. This report includes vegetation mapping and literature review results included in Rincon's 2022 project review and field work.

PROJECT DESCRIPTION

The proposed project consists of the demolition of an existing single-family home and the development of one new single-family home, a driveway, retaining walls, and site finishes (e.g. a pool, deck, and landscaping). The project, as currently designed, would involve disturbance to ornamental landscaping and developed areas within the construction footprint.

Project activities would include demolition, ornamental vegetation clearing, grading, and construction of a residential building, retaining walls, driveway, deck, pool, and other site finishes (e.g., landscaping). The majority of construction would occur on developed areas, with a small portion occurring within areas planted with ornamental landscaping. Areas that would be subject to ground and/or vegetation disturbance are hereafter referred to as the "project site."

PROJECT SETTING

The project site is located within a currently developed lot (Assessor's Parcel Number 056-160-25) situated on the northwest corner of the *Dana Point, California* 7.5-minute United States Geological Survey (USGS) topographic quadrangle map. The parcel ranges from approximately 20 to 160 feet above mean sea level in elevation and is surrounded by residential land uses to the north and south, residential and commercial land uses to the east, and coastal bluffs and beaches along the Pacific

Ocean to the west. Based on available mapping,[1] the parcel is underlain by Cieneba sandy loam and Modjeska gravelly loam soils, as well as beaches on the western end of the parcel. The current City of Laguna Beach Zoning Map (2009) designates the parcel as Residential Low Density.

METHODS

Literature Review and Records Search

LSA Biologist Jessica Lieuw conducted a literature review and records search on August 16, 2019, to identify the existence and potential for occurrence of sensitive or special-status[2] plant and animal species in the vicinity of the project site. Federal and State lists of sensitive species were also examined. Current electronic database records reviewed included the following:

- **California Natural Diversity Data Base information (CNDDB – RareFind 5)**, which is administered by the California Department of Fish and Wildlife (CDFW). This database covers sensitive plant and animal species as well as sensitive natural communities that occur in California. Records from six USGS quadrangles surrounding the project parcel (*Laguna Beach*, *San Juan Capistrano*, *Canada Gobernadora*, *Dana Point*, *San Clemente*, and *San Onofre Bluff*) were obtained from this database to inform the field survey.

- **California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants**, which utilizes four specific categories or "lists" of sensitive plant species to assist with the conservation of rare or endangered botanical resources. All of the plants constituting California Rare Plant Ranks (CRPR) 1A, 1B, 2A, and 2B are intended to meet the status definitions of "threatened" or "endangered" in CESA and the California Department of Fish and Game Code, and are considered by CNPS to be eligible for State listing. At the discretion of the CEQA Lead Agency, impacts to these species may be analyzed as such, pursuant to the CEQA Guidelines Sections 15125(c) and 15380. Plants in Rank 3 (limited information; review list), Rank 4 (limited distribution; watch list), or that are considered Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential significant impacts. Records from the six USGS quadrangles surrounding the project parcel were obtained from this database.

- **United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) Online System**, which lists all proposed, candidate, threatened, and endangered species managed by the Endangered Species Program of the USFWS that have the potential to occur on or near a particular site. This database also lists all known critical habitats, national wildlife

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[1] United States Department of Agriculture Natural Resources Conservation Service. 2019. Web Soil Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed August 2019).

[2] For the purposed of this report, the term "special-status species" refers to those species that are listed or proposed for listing under the CESA and/or FESA, California Fully Protected Species, plants with a CRPR of 1, 2, or 3, California Species of Special Concern, and California Special Animals. It should be noted that "Species of Special Concern" and "California Special Animal" are administrative designations made by the CDFW and carry no formal legal protection status. However, Section 15380 of the CEQA Guidelines indicates that these species should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

refuges, jurisdictional wetlands, and migratory birds that could potentially be impacted by activities from a proposed project. An IPaC Trust Resource Report was generated for the project parcel.

- **The USFWS Critical Habitat Mapper** was reviewed to determine whether critical habitat has been designated within or in the vicinity of the project parcel.
- **The USFWS National Wetlands Inventory** was reviewed to determine whether any wetlands or surface waters of the United States have been previously identified in the project parcel.

In addition to the databases listed above, historic and current aerial imagery, photographs of the project parcel taken in April and September 2019, existing environmental reports for developments in the project vicinity, and regional habitat conservation plans and local land use policies related to biological resources were reviewed.

An updated literature review and records search was conducted by Rincon in August 2022.

Field Surveys

A general biological survey of the project parcel was conducted by LSA biologist Jessica Lieuw on October 15, 2019. All accessible portions of the project parcel were surveyed on foot, and all biological resources observed were noted and mapped. Suitable habitat for any species of interest or concern was noted, and general site conditions were photographed. The field survey took place on a sunny morning with weather conditions conducive to the detection of plant and animal species.

An additional field survey was conducted by Rincon biologist Sarah Toback on August 9, 2022.

RESOURCES EVALUATED

Vegetation

Descriptions of the vegetation and land cover types mapped by Rincon within the project parcel are described below. Non-developed and native/naturalized vegetation communities were mapped using classifications defined by the *Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009).[1]

The acreages of each vegetation community and land cover type occurring in the project parcel are shown in Table A, below. Figure 2 provides a map of these vegetation and land cover types within the project parcel boundary. A complete list of plant species identified within and adjacent to the proposed project site is contained in Attachment B. Representative site photographs taken during the October 2019 and August 2022 surveys are contained in Attachment C. There are no High Value or Very High Value Habitats within the proposed disturbance limits of the project, as designated by the Laguna Beach General Plan Open Space and Conservation Element (2006).

[1] Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, 2nd Edition. California Native Plant Society, Sacramento, CA. 1300 pp.

High Value Habitats are defined as extensive areas dominated by indigenous plant communities that possess good species diversity. They are often linked to extensive open space areas and may be considered Very High Value when they include the habitats of endangered, rare, or locally unique native plant species. None of the mapped vegetation communities or other land cover types within the direct project disturbance limits meet these criteria.

Australian Wattle Ruderal Patches (*Acacia* spp. Shrubland Semi-Natural Alliance): This area consists of patches of nonnative acacia (*Acacia* sp.) and other weedy or pioneering plant species such as Russian thistle (*Salsola tragus*), tree tobacco (*Nicotiana glauca*), and lamb's quarters (*Chenopodium album*). Isolated native shrubs include including California buckwheat (*Eriogonum fasciculatum*), California brittle bush (*Encelia californica*) also occur in this area.

California Brittle Bush Scrub (*Encelia californica* Shrubland Alliance): California brittle bush is dominant in the shrub layer, with other native shrubs including California buckwheat and lemonade berry (*Rhus integrifolia*) also present. As shown on Table A, this habitat type has a ranking of G3/S3, meaning that it is considered to be at moderate risk of extinction and is considered to be a sensitive natural community by CDFW. A relatively small patch of California Brittle Bush Scrub occurs outside of the construction limits of the project, to the west of ornamental landscaping on the parcel.

Developed: Developed areas include all buildings and pavement/hardscapes. The existing home and paved areas on the project site are categorized as developed.

Ornamental: Ornamental landscaping consists of introduced trees, shrubs, flowers, and turf grass. Ornamental landscaping occurs on the majority of the project site and includes species such as sea-fig (*Carpobrotus chilensis*), oleander (*Nerium oleander*), acacia, bird of paradise (*Strelitzia reginae*), garden nasturtium (*Tropaeolum majus*), and foxtail agave (*Agave attenuata*), among others.

Table A: Vegetation and Land Cover Types Within the Project Parcel

Vegetation / Land Cover Type	Acreage	CDFW Ranking
Australian Wattle Ruderal Patches (*Acacia* spp. Shrubland Semi-Natural Alliance)[1]	0.10	Not Ranked
California Brittle Bush Scrub (*Encelia californica* Shrubland Alliance)[1]	0.01	G3/S3[2]
Ornamental	0.21	Not Ranked
Developed	0.18	Not Ranked

[1] Occurs outside of the project disturbance limits.
[2] G3/S3: at moderate risk of extinction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable.
Source: Rincon Consultants, Inc. (2022)

Wildlife

The maintained ornamental vegetation occurring on the project site is considered low quality habitat for most native wildlife species. The westernmost portion of the parcel contains a small stand of native scrub habitat that provides marginally suitable foraging, breeding, and sheltering habitat for native wildlife species; however, this area is outside of the proposed project disturbance limits. A total of eleven wildlife species were observed on or near the project site during the 2019 field survey: California towhee (*Melozone crissalis*), American crow (*Corvus brachyrhynchos*),

western gull *(Larus occidentalis*), red-shouldered hawk (*Buteo lineatus*), house finch (*Haemorhous mexicanus*), yellow rumped warbler (*Setophaga coronata*), Anna's hummingbird (*Calypte anna*), western fence lizard (*Sceloporus occidentalis*), tree spider (*Araneus gemma*), silver argiope (*Argiope argentata*), and European honeybee (*Apis mellifera*). All of these species are commonly encountered in and around developed areas within Orange County.

Special-Status Species

Attachment D contains tables that identify those special-status plant and animal species known to occur or that potentially occur in the vicinity of the project site and includes detailed information about each species' habitat and distribution, activity period, State and Federal status designations, and probability of occurrence within the project site. These species were compiled from the CNPS and CNDDB records search from the six USGS quadrangles surrounding the project site and from LSA's extensive knowledge and experience in the region. A six USGS quadrangle search covers a large, variable geographic and topographic area containing numerous habitat types not found within or around the project site. As such, many of the species listed in Attachment D are not anticipated to occur on the project site due to historic and ongoing anthropogenic disturbances and/or the lack of suitable habitat. The following additional plant species (most of which have a CRPR of 4) were identified in Rincon's 2022 literature review and records search, but are not included in Attachment D due to the lack of potentially suitable habitat within the project site and/ or the lack of appropriate elevation ranges within the project site:

- Yucaipa onion (*Allium marvinii*)
- San Diego sagewort (*Artemisia palmeri*)
- Western spleenwort (*Asplenium vespertinum*)
- Catalina mariposa lily (*Calochortus catalinae*)
- Payson's jewelflower (*Caulanthus simulans*)
- Peninsular spineflower (*Chorizanthe leptotheca*)
- Seaside cistanthe (*Cistanthe maritima*)
- Small-flowered morning-glory (*Convolvulus simulans*)
- Paniculate tarplant (*Deinandra paniculata*)
- Western dichondra (*Dichondra occidentalis*)
- Palomar monkeyflower (*Erythranthe diffusa*)
- Palmer's grapplinghook (*Harpagonella palmeri*)
- Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)
- Southern California black walnut (*Juglans californica*)
- Fish's milkwort (*Polygala cornuta* var. *fishiae*)
- Coulter's matilija poppy (*Romneya coulteri*)
- Wooly seablite (*Suaeda taxifolia*)
- San Diego County viguiera (*Viguiera laciniata*)
- Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)
- Woolly-headed lessingia (*Lessingia hololeuca*)
- California box-thorn (*Lycium californicum*)
- Cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis*)

- Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)
- California Orcutt grass (*Orcuttia californica*)
- Golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*)
- Chaparral rein orchid (*Piperia cooperi*)

The majority of the rare plant species that were identified in the databases have specialized habitat requirements (i.e., they occur on predominantly alkaline soils, woodland, riparian, or wetland habitats, etc.) that do not occur within the project site. Historic anthropogenic disturbances have greatly altered the natural hydrologic regimes and have either eliminated or greatly impacted the pre-settlement habitats needed to support the special-status plant species identified in the CNDDB and CNPS queries. As such, the specific habitats, soil substrates or "micro-climates" necessary for special-status plant species to occur are absent within the boundaries of the project site, which consists of developed areas and maintained ornamental landscaping.

No special-status plant or animal species were observed during the October 2019 or August 2022 site surveys. No special-status species were determined to have a moderate or high potential of occurrence within the project disturbance limits.

Wetlands and Potential Jurisdictional Drainage Features

There are no records of wetlands or potential jurisdictional drainage features existing within the project parcel, and no potentially jurisdictional drainage features, wetlands, or riparian areas were observed on the project site during the field surveys. The Pacific Ocean, a jurisdictional navigable water of the United States, occurs to the west of the project site (outside of the proposed project disturbance limits).

IMPACT FINDINGS

Vegetation and Habitat Impacts

The project would not result in any direct impacts to native habitats or sensitive natural communities. Permanent direct impacts to nonnative ornamental landscaping and developed areas would occur during project construction activities. No mitigation is required.

Consistency with Adopted Natural Community Conservation Plan/Habitat Conservation Plan

The project site is within the Orange County Central-Coastal NCCP/HCP Planning Area. However, the City of Laguna Beach is not a signatory jurisdiction under the NCCP/HCP. Non-participating landowners within a non-signatory jurisdiction in the Planning Area may satisfy the requirements of FESA and CESA with respect to potential incidental take of listed species in either of the following ways: (1) on-site avoidance of Take; or (2) satisfaction of applicable FESA and CESA provisions under the consultation and permit provisions of these statutes (e.g., Section 10(a)(1)(B) of FESA or Section 2081(b) of the California Fish and Game Code, respectively).

The project site is not located within a designated NCCP/HCP Reserve Area, Existing Use Area, or otherwise restricted/conservation area. Furthermore, the project is not anticipated to adversely impact any species covered under the NCCP/HCP or other regional/local plans. This, implementation

of the proposed project would not conflict with any adopted State, regional, or local conservation plan, and no mitigation is required.

Coastal Zone

The proposed project site is located within the Coastal Zone. Therefore, through provisions of the California Coastal Act, the California Coastal Commission is empowered to issue a Coastal Development Permit for many projects located within the Coastal Zone. In areas where a local entity has a certified Local Coastal Program (LCP), the local entity (e.g., the City) can issue a Coastal Development Permit only if it is consistent with the LCP. The proposed project may require authorization under the City's LCP. There are no High Value Habitats or environmentally sensitive habitat areas (ESHAs) within the proposed project disturbance limits. No mitigation is required.

Special-Status Species

No special-status plant or animal species were observed during the site survey and suitable habitat for such species is absent from the proposed project disturbance limits. Attachment D contains tables that identify those special-status plant and animal species known to occur or that potentially occur in the vicinity of the project site, and includes each species' probability of occurrence within the proposed construction footprint. No special-status species are anticipated to be adversely impacted by the project, and no mitigation is required.

Nesting Birds

The project site and immediate vicinity contain vegetation that provides suitable nesting habitat for a variety of native and migratory bird species, which are protected while nesting. To ensure compliance with the Federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3500–3516, pre-construction nesting bird surveys are recommended to occur prior to any vegetation clearing or construction activities planned to occur during the nesting bird season (February 15 through August 31). With successful implementation of the recommended impact avoidance and minimization measures (see below), impacts to nesting birds would be avoided.

Critical Habitat

No portion of the proposed project site is within designated or proposed critical habitat for any federally listed species. Thus, no impacts to critical habitat would result from project implementation and no mitigation is required.

Wildlife Movement

Because the proposed project site is adjacent to existing residential developments outside of any known wildlife movement corridor, project implementation would not have a substantial impact on wildlife movement. No mitigation is required.

Jurisdictional Waters

The proposed project would not result in direct impacts to any delineated jurisdictional waters on the project site. Indirect temporary effects on water quality could occur during construction. Such effects include a potential increase in erosion and sediment transport into adjacent or downstream

aquatic areas. Chemical spills or leaks of fuel, transmission fluid, lubricating oil, or motor oil from construction equipment could also contaminate waters and degrade their quality. These potential indirect effects to hydrology and water quality would be avoided or substantially minimized through the implementation of best management practices (BMPs), project design features, and a water quality management plan and/or a storm water pollution and prevention plan (if required). With successful implementation of the recommended impact avoidance and minimization measures (see below), adverse indirect impacts on water quality (from erosion, runoff, etc.) would be effectively avoided. No mitigation is required.

RECOMMENDED IMPACT AVOIDANCE AND MINIMIZATION MEASURES

The following measures are recommended to avoid or minimize potential project-related impacts on wildlife, adjacent habitat areas, water quality, and nesting birds during construction activities.

Bio-Measure #1: Construction Site Housekeeping

A. Prior to ground disturbance, the Project Contractor shall install adequate erosion and sedimentation barriers (e.g., silt fencing) at the project site boundaries to prevent any sediment-laden runoff or debris from the coastal bluffs and Pacific Ocean located to the west of the project site.

B. The project disturbance limits shall be clearly marked with construction fencing (or other highly visible material), and vehicle/equipment maintenance and fueling areas shall be located at least 100 feet away from the western project site boundaries.

C. To prevent inadvertent entrapment of animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape.

D. For the duration of construction activities, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least daily from the construction site.

E. Use of rodenticides and herbicides in project sites shall be restricted. This is necessary to prevent primary or secondary poisoning of predators and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation.

Construction site housekeeping measures would effectively minimize temporary construction effects on biological resources by limiting construction equipment and personnel from entering areas where wildlife may be impacted, limiting the potential for erosion, fuel, or chemical spills that could adversely impact water quality and adjacent aquatic habitats, reducing the likelihood of

attracting or introducing predators of special-status species, and by preventing the primary or secondary poisoning of wildlife in the project vicinity.

Bio-Measure #2: Pre-Construction Nesting Bird Surveys and Active Nest Avoidance Buffers

If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (February 15 through August 31), a qualified biologist should conduct a pre-construction nesting bird survey no more than 3 days prior to the start of such activities. The nesting bird survey should include the project site and areas immediately adjacent to the site that could potentially be affected by project-related activities such as noise, vibration, increased human activity, and dust, etc. If active bird nests are found within areas that could be directly or indirectly impacted by project-related activities, the qualified biologist should establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active by the qualified biologist.

CONCLUSION

The project site consists of developed areas and ornamental landscaping, with ruderal/weedy vegetation and a small patch of California Brittle Bush Scrub located outside of the proposed project disturbance limits. No special-status biological resources are anticipated to be adversely impacted by the project, and no mitigation is required. With the implementation of recommended impact avoidance and minimization measures, potential project-related effects on wildlife, adjacent habitat areas, nesting birds, and water quality would be avoided or minimized to the extent practicable. If substantial project design changes occur, additional biological resources studies may be warranted to accurately assess the scope of impacts and/or site conditions.

If you have any questions regarding the contents of this letter report, please contact Bo Gould at (949) 553-0666 or Bo.Gould@lsa.net.

Sincerely,

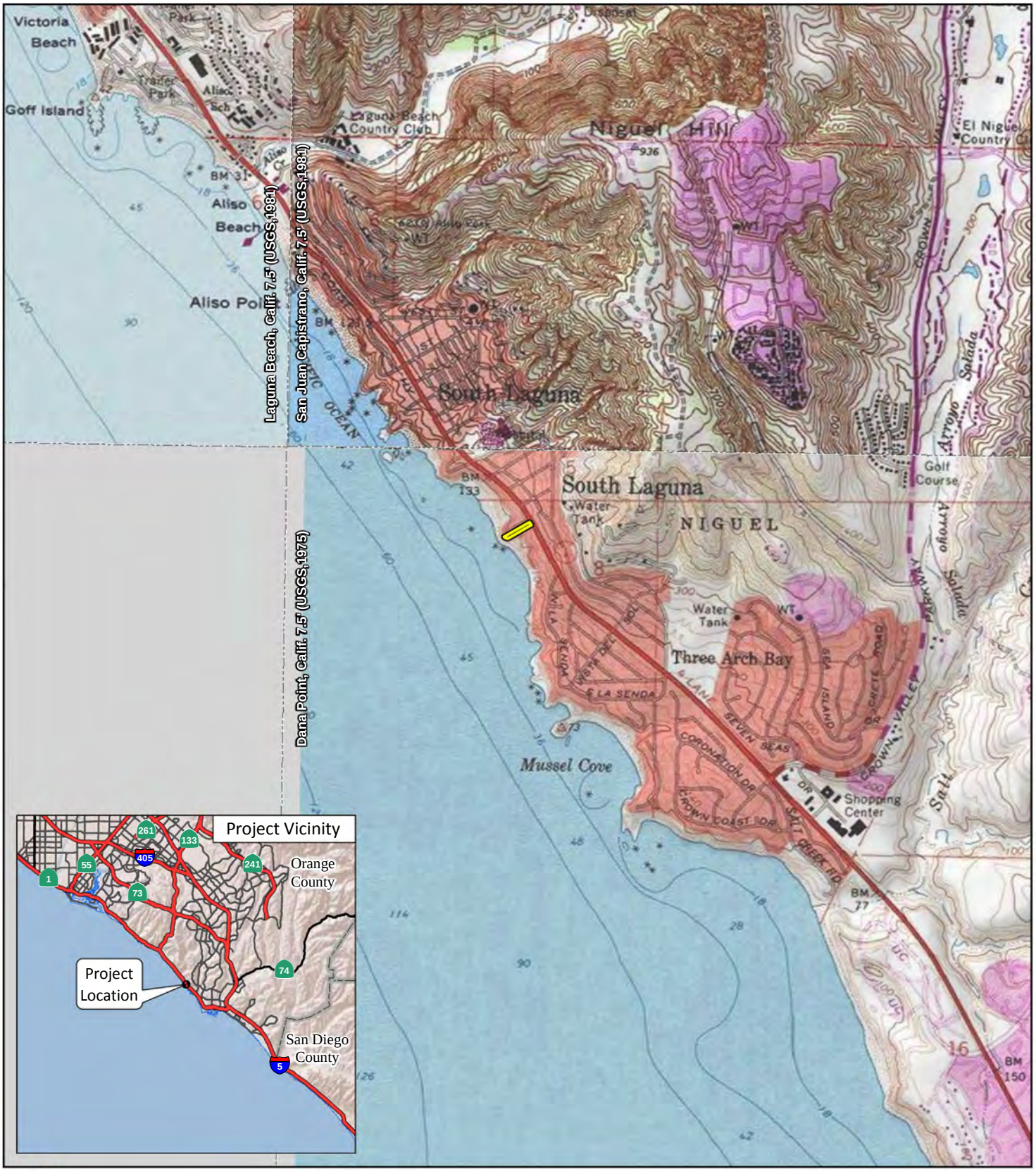
LSA Associates, Inc.

Bo Gould
Associate/Senior Biologist

Attachments: A: Figures
B: Vascular Plant Species Observed
C: Representative Site Photographs
D: Summary of Special-Status Species

ATTACHMENT A

FIGURES



LSA

LEGEND

Project Parcel Boundary

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Dana Point (1975), CA

I:\LEC1901\GIS\MXD\ProjLoc.mxd (8/22/2019)

32051 Coast Highway Residential Development Project

Regional and Project Location

Figure 2 Vegetation Communities and Land Cover Types -- 2022 Rincon

Imagery provided by Microsoft Bing and its licensors © 2022.

BIO Figures
Fig X Vegetation Communities and Land Cover

ATTACHMENT B

VASCULAR PLANT SPECIES OBSERVED

VASCULAR PLANT SPECIES OBSERVED

GYMNOSPERMS

Cupressaceae		**Cypress Family**
	Juniperus californica	California juniper

EUDICOTS

Aizoaceae		**Iceplant Family**
*	*Aptenia cordifolia*	Baby sun rose
*	*Carpobrotus chilensis*	Sea-fig
*	*Malephora crocea*	Coppery mesembryanthemum
*	*Mesembryanthemum nodiflorum*	Small-flowered iceplant
Anacardiaceae		**Sumac Family**
	Rhus integrifolia	Lemonade berry
Apocynaceae		**Dogbane Family**
*	*Nerium oleander*	Oleander
Asteraceae		**Sunflower Family**
*	*Dimorphotheca ecklonis*	Trailing African daisy
	Encelia californica	California encelia
*	*Erigeron karvinskianus*	Latin American fleabane
*	*Lactuca serriola*	Prickly lettuce
	Pseudognaphalium biolettii	Bicolored cudweed
Bignoniaceae		**Trumpet–Creeper Family**
*	*Tecoma capensis*	Cape honeysuckle
Cactaceae		**Cactus Family**
*	*Echinocactus grusonii*	Golden barrel cactus
*	*Mammillaria* sp.	Pincushion cacti
Chenopodiaceae		**Goosefoot Family**
*	*Chenopodium album*	Lamb's quarters
*	*Salsola tragus*	Russian-thistle
Convolvulaceae		**Morning-glory Family**
*	*Ipomoea cairica*	Mile a minute vine
Crassulaceae		**Stonecrop Family**
*	*Cotyledon orbiculata*	Pig's ear
*	*Crassula ovata*	Jade plant
Didiereaceae		**Didierea Family**

*	*Portulacaria afra*	Elephant bush
Euphorbiaceae		**Spurge Family**
*	*Euphorbia hypericifolia*	Graceful spurge
*	*Euphorbia pulcherrima*	Poinsettia
Fabaceae		**Legume Family**
*	*Acacia* sp.	Acacia
Geraniaceae		**Geranium Family**
*	*Pelargonium peltatum*	Ivy geraniuim
*	*Pelargonium zonale*	Horseshoe geranium
Hydrangeaceae		**Hydrangea Family**
*	*Hydrangea macrophylla*	French hydrangea
Lamiaceae		**Mint Family**
*	*Salvia greggii*	Autumn sage
Malvaceae		**Mallow Family**
*	*Hibiscus* sp.	Hibiscus
Moraceae		**Mulberry Family**
*	*Ficus microcarpa*	Indian laurel fig
Myrtaceae		**Myrtle Family**
*	*Leptospermum scoparium*	Broom tea tree
Nyctaginaceae		**Four O'clock Family**
*	*Bougainvillea* sp.	Bougainvillea
Oxalidaceae		**Oxalis Family**
*	*Oxalis pes-caprae*	Bermuda buttercup
Plumbaginaceae		**Leadwort Family**
*	*Limonium perezii*	Perez's sea-lavender
*	*Plumbago auriculata*	Blue plumbago
Polygonaceae		**Buckwheat Family**
	Eriogonum fasciculatum	California buckwheat
Rosaceae		**Rose Family**
*	*Rhaphiolepis indica*	Indian hawthorn
*	*Rosa chinensis*	China rose
Scrophulariaceae		**Figwort Family**
*	*Nemesia sp.*	Lionfaces
Strelitziaceae		**Strelitzia Family**
*	*Strelitzia reginae*	Bird of paradise

Solanaceae		**Nightshade Family**
*	*Nicotiana glauca*	Tree tobacco
Tropaeolaceae		**Nasturtium Family**
*	*Tropaeolum majus*	Garden nasturtium
Ulmaceae		**Elm Family**
*	*Ulmus parvifolia*	Chinese elm
Valerianaceae		**Valerian Family**
*	*Centranthus ruber*	Red valerian
Verbenaceae		**Vervain Family**
*	*Lantana camara*	Lantana
Vitaceae		**Grape Family**
*	*Parthenocissus tricuspidata*	Boston ivy
MONOCOTS		
Agavaceae		**Century Plant Family**
*	*Agave americana*	American century plant
*	*Agave attenuata*	Foxtail agave
*	*Yucca gigantea*	Spineless yucca
Arecaceae		**Palm Family**
*	*Washingtonia robusta*	Mexican fan palm
Asphodelaceae		**Asphodel Family**
*	*Aloe* sp.	Aloe
*	*Dianella caerulea*	Cerulean flax lily
Poaceae		**Grass Family**
*	*Cortaderia selloana*	Pampas grass
	Distichlis spicata	Salt grass

ATTACHMENT C

REPRESENTATIVE SITE PHOTOGRAPHS

View of ornamental landscaping along the southern portion of the existing structure. October 15, 2019.

View of ornamental landscaping and existing structure at the western end of the development footprint, facing northeast. October 15, 2019.

Photo taken from the western end of the parcel, facing northeast. California Brittle Bush Scrub in the foreground would not be disturbed under the current site plans. October 15, 2019.

View of the western end of the project parcel, facing southwest. This area would remain undisturbed under current site plans. October 15, 2019.

Photograph 1. West facing photograph of ornamental landscaping and developed areas of the Project Site.

Photograph 2. West facing photograph of ornamental landscaping within the Project Site.

Photograph 3. West facing photograph of brittle bush scrub (foreground) and Australian wattle patches (background) within the Project Site.

Photograph 4. Northeast facing photograph of ornamental landscaping within the Project Site.

ATTACHMENT D

SUMMARY OF SPECIAL-STATUS SPECIES

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
Aphanisma	*Aphanisma blitoides*	US: – CA: – CNPS: 1B.2 NCCP: NC	Annual herb. Occurs on sandy or clay soils on slopes or bluffs near the ocean, usually in coastal bluff scrub, coastal dunes, or coastal scrub, below 1,000 ft in elevation.	March–June	Not expected. Suitable habitat is absent from the project site.
Coulter's saltbush	*Atriplex coulteri*	US: – CA: – CNPS: 1B.2 NCCP: NC	Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands, usually on ocean bluffs and ridge tops in alkaline or clay soils. From 10 to 1,510 ft in elevation.	March–October	Absent. This perennial herb was not observed during field surveys.
South coast saltscale	*Atriplex pacifica*	US: – CA: – CNPS: 1B.2 NCCP: NC	Annual herb. Found in alkaline soils in coastal scrub, coastal dunes, coastal playas, and coastal bluff scrub habitats below 460 ft in elevation.	March–October	Not expected. Suitable habitat is absent from the project site.
Parish's brittlescale	*Atriplex parishii*	US: - CA: - CNPS: 1B.1 NCCP: NC	Annual herb. Occurs on alkaline soils in playas, vernal pools, and chenopod scrub habitats between 82 and 6,235 ft in elevation.	June–October	Not expected. Suitable habitat is absent from the project site.
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	US: - CA: - CNPS: 1B.2 NCCP: NC	Annual herb. Found on alkaline soils in coastal bluff scrub and coastal scrub up to 657 ft in elevation.	April–October	Not expected. Suitable habitat is absent from the project site.
Thread-leaved brodiaea	*Brodiaea filifolia*	US: FT CA: CE CNPS: 1B.1 NCCP: NC	Perennial herb (bulb). Usually on clay soils or associated with vernal pools or alkaline flats; occasionally in vernally moist sites in fine soils (clay loam, silt loam, fine sandy loam, loam, loamy fine sand). Typically associated with needlegrass or alkali grassland or vernal pools. Occurs from 80 to 3,700 ft in elevation.	March–June	Not expected. Suitable habitat is absent from the project site.

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
Intermediate mariposa-lily	*Calochortus weedii var. intermedius*	US: - CA: - CNPS: 1B.2 NCCP: C	Perennial herb (bulb). Dry, open rocky slopes and rock outcrops in chaparral, coastal sage scrub, and grassland, at 340 to 2,800 ft in elevation.	May–July	Not expected. Suitable habitat is absent from the project site.
Southern tarplant	*Centromadia parryi ssp. australis*	US: - CA: - CNPS: 1B.1 NCCP: NC	Annual herb. Marshes and swamps (margins), valley and foothill grassland (vernally mesic), and vernal pools at 0 to 1,575 ft in elevation.	May–November	Not expected. Suitable habitat is absent from the project site.
Orcutt's pincushion	*Chaenactis glabriuscula var. orcuttiana*	US: - CA: - CNPS: 1B.1 NCCP: NC	Annual herb. Sandy areas of coastal bluff scrub and coastal sand dunes below 300 ft in elevation. In California, known only from Los Angeles, Orange (believed extirpated), San Diego, and Ventura Counties.	January–August	Not expected. Suitable habitat is absent from the project site.
Long-spined spineflower	*Chorizanthe polygonoides var. longispina*	US: - CA: - CNPS: 1B.2 NCCP: NC	Annual herb. Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools, often in clay soils. From 98 to 5,020 ft in elevation.	April–July	Not expected. Suitable habitat is absent from the project site.
San Miguel savory	*Clinopodium chandleri*	US: - CA: - CNPS: 1B.2 NCCP: NC	Perennial shrub. Occurs on rocky, gabbroic or metavolcanic soils within chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. From 390 to 3,530 ft in elevation.	March–July	Absent. This perennial shrub was not observed during field surveys.
Summer holly	*Comarostaphylis diversifolia ssp. diversifolia*	US: - CA: - CNPS: 1B.1 NCCP: NC	Perennial Shrub. Chaparral or cismontane woodland at 100 to 2,600 ft in elevation. In California, known only from Orange, Riverside, Santa Barbara, and San Diego Counties.	April–June	Absent. This perennial shrub was not observed during field surveys.
Blochman's dudleya	*Dudleya blochmaniae ssp. blochmaniae*	US: - CA: - CNPS: 1B.2 NCCP: C	Perennial herb. Dry rocky places, often on clay or serpentine, in chaparral, coastal sage scrub, or grassland, below 1,500 ft in elevation.	May–June	Absent. This perennial herb was not observed during field surveys.

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
Many-stemmed dudleya	*Dudleya multicaulis*	US: - CA: - CNPS: 1B.2 NCCP: NC	Perennial herb. Occurs in chaparral, coastal scrub, and valley and foothill grassland usually in heavy, often clayey soils. From 45 to 2,370 ft in elevation.	April–July	Absent. This perennial herb was not observed during field surveys.
Laguna beach dudleya	*Dudleya stolonifera*	US: FT CA: CT CNPS: 1B.1 NCCP: C	Perennial herb. Rocky areas (generally north-facing sandstone cliffs) at 30 to 850 ft in elevation. Known only from Orange County, California, near Laguna Beach, with most occurrences in Laguna Canyon west of SR-73.	May–July	Absent. This perennial herb was not observed during field surveys.
Sticky dudleya	*Dudleya viscida*	US: - CA: - CNPS: 1B.2 NCCP: NC	Perennial herb. Rocky areas within coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub. From 30 to 1,805 ft in elevation.	May–June	Absent. This perennial herb was not observed during field surveys.
Pendleton button-celery	*Eryngium pendletonense*	US: - CA: - CNPS: 1B.1 NCCP: NC	Perennial herb. Clay, vernally mesic soils within coastal bluff scrub, valley and foothill grassland, and vernal pools. From 50 to 360 ft in elevation.	April–June(July)	Not expected. Suitable habitat is absent from the project site.
Cliff spurge	*Euphorbia misera*	US: - CA: - CNPS: 2B.2 NCCP: C	Shrub. Rocky sites within coastal bluff scrub, coastal sage scrub, and Mojavean desert scrub at 30 to 1,600 ft in elevation. In California, known only from the Channel Islands, coastal Orange and San Diego Counties, and Riverside County deserts.	December–August	Absent. This shrub was not observed during field surveys.
Vernal barley	*Hordeum intercedens*	US: - CA: - CNPS: 3.2 NCCP: NC	Annual herb. Occurs in coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools from 15 to 3,280 ft in elevation.	March–June	Not expected. Suitable habitat is absent from the project site.
Mesa horkelia	*Horkelia cuneata* var. *puberula*	US: - CA: - CNPS: 1B.1 NCCP: NC	Perennial herb. Occurs on sandy and gravelly soils in chaparral, cismontane woodland, coastal scrub habitats between 230 and 2,658 ft in elevation.	February–September	Absent. This perennial herb was not observed during field surveys.

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
California satintail	*Imperata brevifolia*	US: - CA: - CNPS: 2B.1	Perennial rhizomatous herb. Mesic soils within chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub. From 0 to 3,400 ft in elevation.	September–May	Not expected. Suitable habitat is absent from the project site.
Decumbent goldenbush	*Isocoma menziesii var. decumbens*	US: - CA: - CNPS: 1B.2 NCCP: NC	Shrub. Sandy soils, often in disturbed areas, in coastal scrub and chaparral from 30 to 440 ft in elevation. Known from mainland Orange and San Diego Counties and from San Clemente and Santa Catalina Islands in California.	April–November	Absent. This shrub was not observed during field surveys.
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	US: - CA: - CNPS: 1B.1 NCCP: NC	Annual herb. Occurs in marshes and swamps, playas, and vernal pools up to 4,000 ft in elevation.	February–June	Not expected. Suitable habitat is absent from the project site.
Santa Catalina Island desert-thorn	*Lycium brevipes var. hassei*	US: - CA: - CNPS: 3.1 NCCP: NC	Perennial deciduous shrub. Occurs in coastal bluff scrub and coastal scrub from 210 to 985 ft in elevation.	June(August)	Absent. This shrub was not observed during field surveys.
Intermediate monardella	*Monardella hypoleuca ssp. intermedia*	US: - CA: - CNPS: 1B.3 NCCP: NC	Perennial rhizomatous herb. Usually understory within chaparral, cismontane woodland, and lower montane coniferous forest (sometimes). From 1,310 to 4,100 ft in elevation.	April–September	Not expected. Suitable habitat is absent from the project site.
Little mousetail	*Myosurus minimus ssp. apus*	US: - CA: - CNPS: 3.1 NCCP: NC	Annual herb. Occurs in valley and foothill grassland and vernal pools (alkaline). From 65 to 2,100 ft in elevation.	March–June	Not expected. Suitable habitat is absent from the project site.
Mud nama	*Nama stenocarpa*	US: - CA: - CNPS: 2B.2 NCCP: NC	Lake shores, riverbanks, and similar intermittently wet areas at 20 to 1,600 ft in elevation. Known in California from San Diego, Orange, and Riverside Counties and from San Clemente Island.	January–July	Not expected. Suitable habitat is absent from the project site.

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
Prostrate vernal pool navarretia	*Navarretia prostrata*	US: - CA: - CNPS: 1B.1 NCCP: NC	Annual herb. Occurs on mesic soils in coastal scrub, meadows and seeps, vernal pools, and valley and foothill grassland habitats up to 3,970 ft in elevation.	April–July	Not expected. Suitable habitat is absent from the project site.
Chaparral nolina	*Nolina cismontane*	US: - CA: - CNPS: 1B.2 NCCP: NC	Perennial evergreen shrub. Occurs on sandstone or gabbro within chaparral and coastal scrub. From 460 to 4,185 ft in elevation.	(March)May–July	Absent. This perennial shrub was not observed during field surveys.
Allen's pentachaeta	*Pentachaeta aurea ssp. allenii*	US: - CA: - CNPS: 1B.1 NCCP: NC	Grasslands and openings in coastal scrub from 250 to 1,700 ft in elevation. Known only from Orange County, California.	March–June	Not expected. Suitable habitat is absent from the project site.
South coast branching phacelia	*Phacelia ramosissima var. austrolitoralis*	US: - CA: - CNPS: 3.2 NCCP: NC	Perennial herb. Occurs on sandy, sometimes rocky soils within chaparral, coastal dunes, coastal scrub, and marshes and swamps (coastal salt). From 15 to 985 ft in elevation.	March–August	Absent. Suitable habitat is absent from the project site and this perennial species was not observed during field surveys.
White rabbit-tobacco	*Pseudognaphalium leucocephalum*	US: - CA: - CNPS: 2B.2 NCCP: NC	Sand and gravel at the edges of washes or mouths of steep canyons up to 7,000 ft in elevation. In California, known from Los Angeles, Orange, Riverside, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties.	August–November	Absent. Suitable habitat is absent from the project site and this species was not observed during field surveys.
Nuttall's scrub oak	*Quercus dumosa*	US: - CA: - CNPS: 1B.1 NCCP: C	Perennial shrub. On sandy and clay loam soils near the coast within closed-cone coniferous forest, chaparral, and coastal scrub from 50 to 1,300 ft in elevation. In California, known only from western Orange, Santa Barbara, and San Diego Counties.	Year-round	Absent. Suitable habitat is absent from the project site and this perennial species was not observed during field surveys.
Chaparral ragwort	*Senecio aphanactis*	US: - CA: - CNPS: 2B.2 NCCP: NC	Annual herb. Sometimes occurs on alkaline soils. Occurs in chaparral, cismontane, and coastal scrub habitats between 50 and 2,625 ft in elevation.	January–April	Not expected. Suitable habitat is absent from the project site.

Table D-1: Special-Status Plant Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence within the Direct Project Disturbance Limits
Salt spring checkerbloom	*Sidalcea neomexicana*	US: - CA: - CNPS: 2B.2 NCCP: NC	Perennial herb. Occurs on alkaline, mesic soils within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. From 50 to 5,020 ft in elevation.	March–June	Not expected. Suitable habitat is absent from the project site.
Estuary seablite	*Suaeda esteroa*	US: - CA: - CNPS: 1B.2 NCCP: NC	Perennial herb found in coastal marshes and swamps up to 17 ft in elevation.	May–January	Absent. Suitable habitat is absent from the project site and the project site is outside of this species' elevation range.
Big-leaved crownbeard	*Verbesina dissita*	US: FT CA: CT CNPS: 1B.1 NCCP: NC	Steep, rocky, primarily north-facing slopes in maritime chaparral at 150 to 675 ft in elevation within 1.5 miles of the ocean, and rarely in coastal sage scrub near the bottoms of south-facing slopes opposite north-facing slopes of maritime chaparral. Known only from Orange County in central and southern areas of Laguna Beach, and from Baja California.	April–July	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Plant (CSP), California Special Animal (CSA), NCCP/HCP Covered Species (C), Species Not Covered by the NCCP/HCP (NC)
Records

CNPS Designations:
1B = Rare threatened, or endangered in California and elsewhere
2B = Rare, threatened, or endangered in California, but not elsewhere
3 = Plants About Which More Information is Needed – Review List
4 = Plants of Limited Distribution – Watch List

CNPS Threat Rankings:
0.1 = Seriously threatened in California
0.2 = Moderately threatened in California
0.3 = Not very threatened in California

Abbreviation/Acronym Definitions:
CA = California
CNPS = California Native Plant Society
ft = foot/feet
NCCP = Orange County Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan
US = United States

Note: Probabilities of occurrence were determined based on habitat assessments conducted by qualified biologists. Species determined to be "absent" or "not expected" are restricted to habitats or environmental conditions that do not occur within the project site and/or they would have been observable during the surveys.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
INVERTEBRATES				
Crotch bumble bee	*Bombus crotchii*	US: - CA: CSA NCCP: NC	Found from coastal California east to the Sierra-Cascade crest and south into Mexico. Feeds on *Antirrhinum* ssp., *Phacelia* ssp., *Clarkia* ssp., *Dendromecon* ssp., *Eschscholzia* ssp., and *Eriogonum* ssp.	Low. There are known occurrences within the vicinity of the project site and food plants occur adjacent to the project site. However, the species is unlikely to occupy ornamental landscaping within the project site.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	US: FE CA: - NCCP: C	Endemic to southern California. Found in vernal pools and other non-vegetated temporary basins 2-12 in deep.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Globose dune beetle	*Coelus globosus*	US: - CA: CSA NCCP: NC	Fore dunes, sand hummocks, sometimes back dunes along immediate coast. Larvae and pupae spend most of the time in the sand; can be found under vegetation or accumulated debris. Adults spend the hotter summer months aggregating under vegetation or debris and come to the surface at night and on cool, foggy days.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Monarch butterfly (California overwintering population)	*Danaus plexippus*	US: candidate CA: CSA NCCP: NC	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (e.g., eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Roosting Habitat Absent. There are no known occurrences within the vicinity of the project site and suitable roosting habitat is absent from the project site. Individuals may fly through the project vicinity during migrations.
Riverside fairy shrimp	*Streptocephalus woottoni*	US: FE CA: - NCCP: C	Restricted to deep vernal pools and ponds that retain water for 2-8 months within annual grasslands, which may be interspersed with chaparral or coastal sage scrub vegetation.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
AMPHIBIANS				
Arroyo toad	*Anaxyrus californicus*	US: FE CA: SSC NCCP: C	Inhabits washes, arroyos, sandy riverbanks, and riparian areas with willows, sycamores, oaks, and cottonwoods. Have extremely specialized habitat needs, which include exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Western spadefoot	*Spea hammondii*	US: - CA: SSC NCCP: C	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 ft. Requires temporary pools for breeding.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
Coast range newt	*Taricha torosa*	US: - CA: SSC NCCP: NC	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
REPTILES				
Southern California legless lizard	*Anniella stebbinsi*	US: - CA: SSC NCCP: NC	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
California glossy snake	*Arizona elegans occidentalis*	US: CA: SSC NCCP: NC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. This subspecies, *Arizona elegans occidentalis* - California Glossy Snake, occurs from the eastern part of the San Francisco Bay Area south to northwestern Baja California.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Orange-throated whiptail	*Aspidoscelis hyperythra*	US: - CA: SSC NCCP: C	Inhabits low-elevation coastal scrub, chaparral, and valley hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food, termites.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	US: - CA: CSA NCCP: C	Occurs in deserts and semiarid areas with sparse vegetation. Typically found in open chaparral, woodland and riparian areas.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Red diamond rattlesnake	*Crotalus ruber*	US: - CA: SSC NCCP: C	Associated with chaparral, woodland, grassland, and desert communities from Los Angeles County to Baja California Sur. Prefers rocky areas with dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects for shelter.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Western pond turtle	*Emys marmorata*	US: - CA: SSC	Occurs in a variety of habitats, including woodland, grassland, and open forest. Thoroughly aquatic, existing in good-quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
Coast horned lizard	*Phrynosoma blainvillii*	US: - CA: SSC NCCP: C	Occurs in open areas of sandy soil within CSS, chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Coronado skink	*Pestiodon skiltonianus interparietalis*	US: - CA: CSA NCCP: C	Grassland, woodlands, pine forests, and chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers. Prefers rocky areas near streams with lots of vegetation, but can also be found in areas away from water.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Two-striped gartersnake	*Thamnophis hammondii*	US: CA: SSC NCCP: NC	Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest. Primarily aquatic and diurnal. Ranging from the central coast of California to the central coast of Baja California.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
BIRDS				
Cooper's hawk (nesting)	*Accipiter cooperii*	US: - CA: CSA NCCP: NC	Nests in a wide variety of woodland and forest habitats.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
Tricolored blackbird (nesting colony)	*Agelaius tricolor*	US: - CA: SSC NCCP: NC	Highly colonial nester largely endemic to California. Most numerous in the Central Valley and vicinity. Requires open water, protected nesting substrate, and a foraging area with insect prey within a few kilometers of the colony.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	US: - CA: CSA NCCP: C	Resident in Southern California CSS and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Grasshopper sparrow (nesting)	*Ammodramus savannarum*	US: - CA: SSC NCCP: NC	Occurs in dense grasslands, preferring native grasslands with a mixture of forbs and shrubs.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Golden eagle (nesting and wintering)	*Aquila chrysaetos*	US: - CA: CFP NCCP: C	Live in open and semiopen country featuring native vegetation. Avoids developed areas and uninterrupted stretches of forest. Nest on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Long-eared owl	*Asio otus*	US: - CA: SSC	Roost in dense vegetation and forage in grasslands, shrublands, and woodlands. Nest in brushy vegetation adjacent to open habitats, or forests.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Burrowing owl (burrow sites and some wintering sites)	*Athene cunicularia*	US: - CA: SSC NCCP: NC	Burrows in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Coastal cactus wren (San Diego and Orange Counties only)	*Campylorhynchus brunneicapillus sandiegensis*	US: - CA: SSC NCCP: C	Occurs in CSS habitats. Requires tall *Opuntia* cactus for nesting and roosting.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Yellow rail	*Coturnicops noveboracensis*	US: - CA: SSC NCCP: NC	Occurs in shallow marshes and wet meadows; in winter, drier fresh-water and brackish marshes, as well as dense, deep grass, and rice fields.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
White-tailed kite (nesting)	*Elanus leucurus*	US: - CA: CFP NCCP: NC	Breeds in riparian trees such as oaks, willows, and cottonwoods in lower-elevation areas, particularly coastal valleys and plains.	Not expected. While there are known occurrences within the vicinity of the project site, suitable nesting habitat is absent from the project site.
Southwestern willow flycatcher (nesting)	*Empidonax traillii extimus*	US: FE CA: CE NCCP: C	Found in thickets, scrubby and brushy areas, open second growth, swamps, and open woodland. Prefers forested areas around rivers and streams. Usually nests in trees growing near water, often in willow.	Not expected. While there are known occurrences within the vicinity of the project site, suitable nesting habitat is absent from the project site.
California horned lark	*Eremophila alpestris actia*	US: - CA: CSA NCCP: NC	Favors bare, dry ground and areas of short, sparse vegetation. Avoids places where grasses grow more than a couple inches high. Common habitats include prairies, deserts, beaches, dunes, and heavily grazed pastures. Also found in areas cleared by humans, such as plowed fields and mowed expanses around airfields. Nests in depressions on bare ground.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Yellow-breasted chat (nesting)	*Icteria virens*	US: - CA: CSA NCCP: NC	Typically occurs in dense shrubbery, including abandoned farm fields, clearcuts, powerline corridors, fencerows, forest edges and openings, swamps, and edges of streams and ponds. Its habitat often includes blackberry bushes. In arid regions of the West, it is frequently found in shrubby habitats along rivers.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	US: - CA: CE NCCP: NC	Live in grasslands with few trees, including meadows, pastures, grassy roadsides, sedge wetlands, and cultivated fields. Also inhabit tidal saltmarshes and estuaries.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Coastal California gnatcatcher	*Polioptila californica californica*	US: FT CA: SSC NCCP: C	Obligate, permanent resident of coastal sage scrub habitats below 2,500 ft in elevation in Southern California.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat is generally absent from the project site.
Yellow warbler (nesting)	*Setophaga petechia*	US: - CA: SSC NCCP: NC	Occurs in bushes, swamp edges, streams, gardens. Breeds in a variety of habitats in east, including woods and thickets along edges of streams, lakes, swamps, and marshes, favoring willows, alders, and other moisture-loving plants. Also in drier second-growth woods, orchards, roadside thickets. In west, restricted to streamside thickets. In winter in the tropics, favors semi-open country, woodland edges, and towns.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
California least tern (nesting colony)	*Sternula antillarum browni*	US: FE CA: CE NCCP: NC	Lives along the coast. Nests on open beaches kept free of vegetation by the tide.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Least Bell's vireo (nesting)	*Vireo bellii pusillus*	US: FE CA: CE NCCP: C	Occurs in moist thickets and riparian areas that are predominantly composed of willow and mule fat.	Not expected. While there are known occurrences within the vicinity of the project site, suitable habitat is absent from the project site.
MAMMALS				
Pallid bat	*Antrozous pallidus*	US: - CA: SSC NCCP: NC	Roosts in a variety of places such as caves, rock crevices, mines, hollow trees, and buildings. Also occur in oak and pine forested areas and open farmland. Roosts are usually near a source of water.	Low. There are no known occurrences within the vicinity of the project site, and suitable foraging and roosting habitat on the project site is marginal.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	US: - CA: SSC NCCP: NC	Ranges from San Francisco Bay south to the border of Baja California, and eastward to the edge of the Central Valley. C. *californicus* is also encountered on the west side of the Central Valley, along the foothills of the Sierra Nevada. This species is found from the town of Auburn south, and west across the Tehachapi Mountains to the coast.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	US: - CA: SSC NCCP:	Habitats tend to be stony soils above sandy desert fans and rocky areas within shrub communities such as coastal sage scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland.	Low. There are no known occurrences within the vicinity of the project site, and suitable habitat on the project site is marginal.
Mexican long-tongued bat	*Choeronycteris mexicana*	US: - CA: SSC NCCP: NC	Occasionally found in San Diego County. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves as well as in and around buildings.	Low. There are no known occurrences within the vicinity of the project site, and suitable foraging and roosting habitat on the project site is marginal.
Stephens' kangaroo rat	*Dipodomys stephensi*	US: FE CA: CT NCCP: NC	Occurs primarily in annual and perennial grassland habitats, but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas. Preferred perennials are buckwheat and chamise; preferred annuals are brome grass and filaree.	Low. There are no known occurrences within the vicinity of the project site, and suitable habitat on the project site is marginal.
Western mastiff bat	*Eumops perotis californicus*	US: - CA: SSC NCCP: NC	Inhabits many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral communities. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Low. There are no known occurrences within the vicinity of the project site, and suitable foraging and roosting habitat on the project site is marginal.
Western red bat	*Lasiurus blossevillii*	US: - CA: SSC NCCP:	Roosts in the foliage of trees and shrubs in forests. Often relies on riparian trees for roosting and foraging; often associated with mature stands of cottonwood, sycamore, and willows adjacent to streams.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Yuma myotis	*Myotis yumanensis*	US: - CA: CSA NCCP: NC	Common and widespread in California. Found in a wide variety of habitats in elevations ranging from sea level to 11,000 ft. Optimal habitats are open forests and woodlands with sources of water over which to feed.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
San Diego desert woodrat	*Neotoma lepida intermedia*	US: - CA: SSC NCCP: C	Common to abundant in Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Also found in a variety of other habitats. Most abundant in rocky areas with Joshua trees. Elevation range from sea level to 8,500 ft.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
Pocketed free-tailed bat	*Nyctinomops femorasacca*	US: - CA: SSC NCCP: NC	Spotty distribution in California, ranging from Southern California south to the Baja Peninsula, and through southwestern Arizona to at least central Mexico. In California, typically found in rocky, desert areas with relatively high cliffs.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
Big free-tailed bat	*Nyctinomops macrotis*	US: - CA: SSC NCCP: NC	Inhabits low-lying arid areas in southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Low. There are no known occurrences within the vicinity of the project site, and suitable foraging and roosting habitat on the project site is marginal.
Pacific pocket mouse	*Perognathus longimembris pacificus*	US: FE CA: SSC NCCP: NC	Inhabits friable soils along the narrow coastal plains from the northern Mexican border to Los Angeles County.	Low. While there are known occurrences within the vicinity of the project site, suitable habitat on the project site is marginal.
American badger	*Taxidea taxus*	US: - CA: SSC NCCP: NC	Prefer to live in dry, open grasslands, fields, and pastures. Lives in burrows.	Not expected. There are no known occurrences within the vicinity of the project site, and suitable habitat is absent from the project site.
FISH				
Tidewater goby	*Eucyclogobius newberryi*	US: FE CA: SSC NCCP: NC	Inhabits coastal lagoons and brackish bays at mouth of freshwater streams. Is subjected to wide variation in salinity (1–28 ppt) and temperature (9–25°C) both within and among habitat types. The substrate and vegetation can also differ among lagoon, creek and marsh habitats.	Absent. No suitable fish habitat is present on the project site.

Table D-2: Special-Status Animal Species Identified as Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence within the Direct Project Disturbance Limits
Arroyo chub	*Gila orcuttii*	US: - CA: SSC NCCP: NC	Inhabits sandy and muddy bottoms of flowing pools and runs of headwaters creeks and small to medium rivers. Often found in intermittent streams.	Absent. No suitable fish habitat is present on the project site.
Steelhead – southern California DPS	*Oncorhynchus mykiss irideus pop. 10*	US: FE CA: - NCCP: NC	Requires streams with adequate dissolved oxygen. Spawning habitat consists of gravel substrates free of excessive silt.	Absent. No suitable fish habitat is present on the project site.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Plant (CSP), California Special Animal (CSA), NCCP/HCP Covered Species (C), Species Not Covered by the NCCP/HCP (NC)

Abbreviation/Acronym Definitions:
CA = California
CSS = coastal sage scrub
ft = foot/feet
NCCP = Orange County Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan
ppt = parts per thousand
US = United States

Note: Probabilities of occurrence were determined based on habitat assessments conducted by qualified biologists. Species determined to be “absent” or “not expected” are restricted to habitats or environmental conditions that do not occur within the project site and/or they would have been observable during the surveys. Species with a “low” likelihood of occurrence do not have historical records of occurrence within or immediately adjacent to the study area, and/or the habitats or environmental conditions needed to support the species are very limited or of poor quality on the project site.

Appendix C

Cultural Resources Assessments

To:	City of Laguna Beach
Attn:	Wendy Jung, Senior Planner
From:	Laura Janssen, Senior Architectural Historian
Date:	October 3, 2022

INTRODUCTION

Per your request, Historic Resources Group (HRG) has evaluated the single-family residential property located at 32051 Coast Highway in the City of Laguna Beach for potential historic significance and eligibility for listing in the Laguna Beach Historic Register and the California Register of Historical Resources. HRG conducted a site visit on February 24, 2020 and reviewed existing documentation on the development of the property, including historic newspaper accounts, census and city directory records, historic aerials, Orange County archives, and the property's permit history as provided by the City.

Previous Surveys and Evaluations

The single-family residence at 32051 Coast Highway is located along Coast Highway in the South Laguna neighborhood. South Laguna was included in the City's 1980-81 historic resources survey; however, the subject property was not included in the survey. The property has not been previously identified as a potential heritage property and is not currently listed in the Laguna Beach Historic Resources Inventory, adopted in December 1982.[1] The Inventory only included buildings that were constructed prior to 1940. The single-family residence at 32051 Coast Highway was constructed in 1948. The subject property will be evaluated using the City's criteria for placement in the Laguna Beach Historic Register and the criteria for listing in the California Register of Historical Resources.

[1] "City of Laguna Beach Historic Resources Inventory" (Resolution No. 82.111), adopted December 21, 1982.

HISTORIC CONTEXT

The single-family residence at 32051 Coast Highway is located in the South Laguna Bluffs neighborhood along Coast Highway in what is now the southern portion of the city. The residence was constructed in 1948 in the Three Arches Palisades No. 2 subdivision, which was subdivided in 1927. It has the potential to be significant for its association with the development of Laguna Beach and the South Laguna neighborhood, association with persons who may have made an impact to local history, or was the site of a historic local event, or for having distinctive characteristic of a particular architectural style.

South Laguna

South Laguna, originally a small, unincorporated beach community in Orange County, was annexed by the City of Laguna Beach in 1987.[2] Homes in South Laguna are set into the hillside or perched on a cliff overlooking the beach. Few houses are situated on level lots, and the overwhelming majority of South Laguna homes are cottages and bungalows, hastily built as beach homes and continuously remodeled.

One of the original homesteaders in South Laguna was William Egan, who took up a claim extending from West Street to approximately 10th Avenue in 1907. In 1927, Dwight Whiting and Blanche Dolphe purchased the area, and named it Three Arches, for the Three Arches Bay. They hired Lewis Lasley as their tract manager and divided 120′ by 40′ parcels into thirds, creating the narrow lots that characterize the area. By popular vote, the area formerly known as Three Arches was renamed South Laguna in 1934.[3]

Beach communities such as South Laguna were characterized by small beach cottages throughout their early history. Due to the corrosive nature of the sea air, building materials utilized near the beach require replacement over time, including wood sash windows or wood siding. Many residences were altered over time as needed to replace original materials and maximize the inhabitants' ability to enjoy the ocean view and sea breeze.

The residence at 32051 Coast Highway was constructed in 1948 in the Three Arches Palisades No. 2 subdivision, subdivided along the South Laguna Bluffs in 1927.

[2] Because South Laguna was an unincorporated part of Orange County for most of its history, it was not covered by Sanborn Fire Insurance maps, nor was it comprehensively covered in South Orange County directories. Three neighborhoods made up Three Arches (now South Laguna): Coast Royal, South Laguna, and Three Arches Bay. There appears to be some overlap in the boundaries for these neighborhoods. However, properties across the street from 31987 Coast Highway were included in the Three Arches district identified in the 1981 survey of South Laguna.
[3] Information on South Laguna largely adapted from Environmental Coalition, "South Laguna," State of California Department of Parks and Recreation Historic Resources Inventory form, November 1980, prepared April 1981.

Minimal Traditional Architecture

The Minimal Traditional style is defined by a single-story configuration, simple exterior forms, and a restrained use of traditional architectural detailing. The Minimal Traditional house was immensely popular in large suburban residential developments throughout the United States during the 1940s and early 1950s. The style had its origins in the principles of the Modern movement and the requirements of the FHA and other Federal programs of the 1930s. Its open plan reflected the developer's desire for greater efficiency. Modern construction methods addressed the builder's need to reduce costs and keep homes affordable to the middle class. Conventional detailing appealed to conservative home buyers and mortgage companies. In Southern California, the style is closely associated with large-scale residential developments of the World War II and postwar periods. Primarily associated with the detached single-family house, Minimal Traditional detailing may also be applied to apartment buildings of the same period.

Typical character-defining features include:

- One-story configuration
- Rectangular plan
- Medium or low-pitched hip or side-gable roof with shallow eaves
- Smooth stucco wall cladding, often with wood lap or stone veneer accents
- Wood multi-light windows (picture, double-hung sash, casement)
- Projecting three-sided oriel
- Shallow entry porch with slender wood supports
- Wood shutters
- Lack of decorative exterior detailing

Carl Hoerman (1885-1955) [4]

Carl Hoerman was born in Babenhausen, Bavaria, Germany in 1885 to Simon and Theresia Hoerman. He was one of several children. His father was a draftsman and cabinetmaker who began training him at a young age in the woodcarving business. During this time, Hoerman picked up drawing and was primarily self-taught. It is believed that he had attracted the attention of Prince Carl Fugger, the lord of the castle at Babenhausen, who sponsored his studies for art in Munich. However, there are no records of Hoerman attending any art schools.

In 1904 at the age of nineteen, Hoerman emigrated to the United States from Hamburg, Germany. He arrived in New York and eventually made his way to Chicago, his final

[4] Merrill, Peter C. "Carl Hoerman, Painter of the Desert." *Southern California Quarterly 73, no. 3* (1991): 279-86. Accessed March 6, 2020. doi:10.2307/41171582.

destination. In Chicago, he began working in factories during the day and attended architecture classes in the evenings. A few years later he began working for a number of architectural firms including Richard A. Paddock and Company, Louis Guenzel, and Marshall and Fox. During this time, he met a young woman named Christiana Ackermann, whom he married in 1907. She was an artist that specialized in still life painting. The two spent their honeymoon at a resort in Saugatuck, Michigan and fell in love with its beauty. In 1908, Hoerman became a licensed architect and began his own practice the following year. Most of his works included private homes and a few commercial buildings. By 1910, he became a naturalized citizen of the United States.[5] The couple remained in Chicago until 1920 when they moved to Saugatuck, Michigan.

In Saugatuck, the Hoermans settled down and made this city their primary residence. Hoerman began to focus more on his love for painting rather than architecture. He built his own home and studio here known as the Chalet. The property was located on a bluff that overlooked the Kalamazoo River. At this time, his work focused on landscape paintings, specifically the sand dunes of Saugatuck, which he immortalized. In the wintertime, Hoerman and his wife began to explore more of the southwest with frequent trips to Arizona and California where he found more inspiration from places like the Grand Canyon.

By the 1930s, cities like Flagstaff, Riverside, and Rancho Mirage became annual pilgrimages for the Hoermans. In 1939, they built a house they named Casa Sierra Vista in Riverside, which they sold to an old friend from Chicago in 1944. After selling the home, they began spending time in Rancho Mirage and in the Orange County area. In 1943, they bought land in South Laguna on a cliff overlooking the Pacific Ocean.[6] However, they did not decide to develop it until years later. Instead, they were living in Rancho Mirage and built a house they named Casa del Desierto in 1946. It was not until 1948 when they decided to construct a house on their property in South Laguna at 32051 Coast Highway. They occupied the house for less than one year before ultimately moving back to Michigan. They sold the house to William and Jean Duckham in 1951.

Although the couple wished to stay in California, it was not feasible for them to do so as artists. Saugatuck provided steady income for them as the artist colony grew in that city. By the 1950s, Hoerman's health began to decline, and these trips became less frequent. In 1955, he passed away in Douglas, Michigan.

[5] 1910 Naturalization documentation. Accessed via Ancestry.com March 8, 2020.
[6] Chain of Title for 32051 Coast Highway provided by the Orange County Archives.

William A. Duckham (1894-1964)

William A. Duckham was born in Pittsburgh, Pennsylvania in 1894 to Albert and Mary Duckham. He was an only child and spent most of his young adulthood in Pennsylvania. In 1914, he left to attend Cornell University in Ithaca, New York and graduated in 1917. He enlisted in the U.S. Marine Corps that year and was commissioned as a second lieutenant by President Wilson. After four months, he quickly rose in the ranks and was promoted to first lieutenant. Less than one year later, he was promoted to captain.[7] For his service, he received wound stripes for his injuries and the Croix de Guerre in World War I. In 1919, he was honorably discharged at the Philadelphia Navy Yard and returned to civilian life in Pittsburgh. In 1920, he was working as a salesman in the steelworks industry.[8] In 1923, he married Miss Jean Nieman. Miss Nieman was a local girl who graduated from Thurston Preparatory School and Ogontz School for Young Ladies. In the 1930s, Duckham began to work as a stockbroker in the Pittsburgh Stock Exchange for several companies including Moore, Leonard & Lynch and Gammack & Company. He eventually opened his own investment firms W.A. Duckham & Co and then Duckham & Hackett. The latter dissolved in 1940. In 1942, Duckman registered for the World War II draft and became a commander in the U.S. Navy. His mother also passed away that year. In 1944, he was honorably discharged.[9] By 1945, he was working as the head of the Loan Division of the Pittsburgh Regional Veterans' Affairs office as a loan guarantee officer. He worked there until 1948 when he decided to enter the private industry.[10] During that time, his father passed away and left him the remainder of his estate.

In 1948, the Duckhams left Pittsburgh and moved to Laguna Beach, California and settled in the Emerald Bay neighborhood. Duckham's interest in Laguna Beach led him to enter the real estate business, and with his background in business, Duckham was appointed as an interim board member for the Festival of Arts.[11] Following suit, Mrs. Duckham was also invested in the liberal arts and eventually picked up painting. She was a member of Laguna Beach Art Association and the Patience Wright Chapter of the Daughters of the American Revolution (DAR).[12] In 1951, they purchased the house at 32051 Coast Highway, which became their primary residence. Their home was used to entertain many guests as well as host meetings for several organizations including the Patience Wright chapter of the DAR.[13] The home also became a studio and inspiration for Mrs. Duckham. Her paintings of the California coast were displayed at art exhibits in Laguna Beach,

[7] "Pittsburgh Soldiers Cited for Bravery on French Front," *Pittsburgh Daily Post* (Pittsburgh, Pennsylvania), October 3, 1918.
[8] 1920 United States Federal Census. Accessed via Ancestry.com.
[9] World War II Compensation Application for William A. Duckham, April 15, 1950.
[10] "VA Loan Officer Entering Industry," *Pittsburgh Sun-Telegraph* (Pittsburgh, Pennsylvania), October 28, 1948.
[11] "Festival of Arts," *South Coast News,* January 10, 1950
[12] "Mrs. Jean Duckham Passes Away," *Long Beach Post,* August 15, 1963
[13] "DAR Officers Meet at Duckham Home Saturday Evening," *Laguna Beach Post,* July 12, 1951.

Pasadena and Pittsburgh.[14] The Duckhams only lived in the house for little over seven years. They put the house on the market in 1957 so they could travel more and split their time between living on the coast and in the desert.[15] The house sold in 1958 to James and Hazel Hudson. In 1963, Mrs. Duckham passed away, and the following year Mr. Duckham became ill and passed away in Laguna Beach, California.

Construction and Development History[16]

In 1926, Blanche Dolph sold about 100 acres, including Lot 1 of Section 8, which included 32051 Coast Highway, to the Whiting Company. Afterwhich she formed a partnership with Dwight Whiting to subdivide the area. In 1927, they hired Lewis Lasley to lay out long narrow lots along the coast and named the development "Three Arches Palisades No. 2," which ultimately became known as Three Arches. Lot 31 was designated for 32051 Coast Highway. The same year, the Whiting Company sold the land to the Bank of Italy National Trust and Savings.

In 1928, the Bank of Italy sold the land to Arthur St. Vincent Burnaby. The lots along the coast remained largely underdeveloped with few residential properties. In 1934, Three Arches name changed to South Laguna. In 1939 Burnaby passed away and his estate was sold in 1941 to Elmer C. and Pauline M. Neher. Two years later, the Nehers sold the undeveloped land to Carl and Christiana Hoerman. Carl Hoerman, the architect turned artist, built a home on the property in 1948. The house was likely used as a winter home, and they ended up renting it after less than a year of use to Mr. and Mrs. Carl Mead.[17]

In 1951, the Hoermans sold the house to William A. and Jean N. Duckham. The Duckhams occupied the house for a little over seven years with no known improvements made to the property. In 1958, they sold it to James B. and Hazel D. Hudson. In 1962, Hudson's son, George was caught stockpiling an arsenal of weapons at his home in Eagle Rock and at his father's home in South Laguna. The guns were confiscated, and George received a two-year probation for violating the Federal arms act. In 1966, James Hudson passed away and his wife added their daughter Catherine H. Sumner to the title in 1971. No documented improvements were made during this ownership; however, it appears an unpermitted addition to the rear of the house was built during the mid-1960s. In 1973, Mrs. Hudson passed away and Catherine Sumner became the sole owner. She owned the property until her death in 2008, when the property was passed on to her son Donald Sumner. A permit was pulled in 2004 to convert the electrical system from overhead to

[14] "Jean Duckham Shows Paintings," *South Coast News*, November 25, 1954.
[15] "Just South of Laguna," *South Coast News,* November 8, 1957.
[16] Chain of Title for 32051 Coast Highway provided by the Orange County Archives.
[17] "Carl Meads to Occupy Home of Carl Hermans," *South Coast News*, May 19, 1949.

underground with a new 200-amp service, but the permit expired.[18] Donald Sumner had the permit reissued in 2017 and sold the property to current owners Chuck Truc Tron Le and Christine Chung.

ARCHITECTURAL DESCRIPTION

The single-family residence with attached garage at 32051 Coast Highway is located on the west side of Coast Highway between Point Place and North Portola on lot 31 in the Three Arches Bay Tract. The lot is on a bluff that overlooks that Pacific Ocean. It is flanked to the north by a small single-family residential subdivision and to the south by a large single-family residence. The residence is set-back deeply from the street and is accessed by a long paver stone driveway with a landscaped yard to the south. The house is situated at the west end of the parcel and is enclosed by a stucco wall with a wood gate that is attached to the garage. The wood gate accesses a courtyard with stone paving and planter beds. There are entrances to the garage and residence from the courtyard, and there is a wood framed windscreen with fixed windows and with a shed roof. Past the windscreen, there is a set of brick steps that lead down to a paved brick pathway that goes around the house and has access to a wood framed balcony. From the pathway, there are concrete steppingstones that lead to the edge of the bluff.

The residence is one-story in height with an irregular rectangular plan and asymmetrical composition. It has simple massing with a multi-gabled roof, composition shingles and overhanging eaves with exposed rafter tails. The exterior walls are clad in sand finish cement plaster. Fenestration primarily consists of fixed wood picture windows with simple wood surrounds and projecting sills. There is an exterior brick chimney on the north facade and projecting balcony on the west facade.

The front-facing garage has a metal overhead door with a wood frame and decorative wood header. The entrance to the garage is on the south façade. It has a wood paneled and partially glazed door with a simple surround. The door is flanked by divided light wood sash windows with a simple surround and projecting wood sills. The primary entrance to the residence is also located on the south façade. It has a single paneled composition door with a simple surround and wood screen. It is flanked by fixed wood sidelights with reeded glazing. There is an addition at the southwest corner of the house with board-and-batten wood siding, a low sloping shed roof, fixed picture windows, a cantilevered wood balcony, and a wide overhanging eave. On the west façade, there is a prominent triangular bay window with wood framed picture windows supported by a

[18] City of Laguna Beach Building Permit B04-1791, August 23, 2004.

wood post. The north façade has a variety of fixed and operable wood framed and vinyl/metal replacement windows.

Alterations

Visual observation and a review of building permits, County archive records, and aerial photography indicate that 32051 Coast Highway has remained largely intact since its initial construction in 1948. There is no original building permit; however, the house was likely constructed in 1948 because the assessed value of the property in 1947 was $0 and the 1947 aerial photograph shows a vacant parcel. In 1948, the assessed value of the property was $2,240 indicating there were improvements made to the property. Based on aerials, the addition to the rear of the property took place sometime in the mid-1960s. There are no available permits for this addition. In 2017, a permit was reissued to convert electrical from overhead to underground with a new 200-amp service meter. Visual observation indicates several windows and the front entry door have been replaced.

EVALUATION CRITERIA

A property may be designated as historic by national, state, and local authorities. Current designations available in Laguna Beach include the National Register of Historic Places, the California Register of Historical Resources, and the Laguna Beach Historic Register. While some programs place emphasis on architectural character, all use basic criteria relating to a property's place in important events or patterns of development, association with important personages, and architectural significance. This assessment is limited to determining eligibility for listing in the Laguna Beach Historic Register and the California Register of Historical Resources.

Laguna Beach Historic Register

In order for a building to qualify for local listing in the City of Laguna Beach it must meet one or more identified criteria of significance. The property must also retain sufficient architectural integrity to continue to evoke the sense of place and time with which it is historically associated.

The City of Laguna Beach recently amended their Historic Preservation Program, and the City Council adopted a new ordinance on April 26, 2022, which updated Chapter 25.45 of the Laguna Beach Municipal Code. It was certified by the California Coastal Commission on July 13, 2022. The revised Historic Preservation Ordinance includes four key elements: (1) a definition of the term "Historic Resource" has been added; (2) "owner consent" has been added to the criteria for eligibility; (3) references to the outdated 1981

Historic Resources Inventory has been eliminated; and (4) expanded historic preservation incentives have been added.[19]

As outlined in the city's revised Historic Preservation Ordinance (Laguna Beach Municipal Code Chapter 25.45 Historic Preservation), upon submittal of an application by the property owner(s), a building, grouping of buildings, structure, site, object, or district shall be considered for designation by the Heritage Committee if it meets criterion (1) and also one or more of criteria (2) through (11):

(1) The owner of the property voluntarily agrees to the placement on the register;

(2) It is listed on the National Register or the State Register;

(3) It exemplifies the cultural, political, economic, social or historical heritage of the community;

(4) It is identified with a person, events, culture or site significant in local, state or national history;

(5) It is representative of the work of a notable builder, designer, architect, or artist including those of local importance;

(6) It embodies distinguishing architectural characteristics of a style, type, period or method of construction that exemplify a particular architectural style or way of life important to the City;

(7) It embodies elements that represent a significant structural, engineering, or architectural achievement or innovation;

(8) It has a unique location, a singular physical characteristic, or is an iconic visual feature or public view point within the City;

(9) Is one of the remaining examples in the City, region, state or nation possessing distinguishing characteristics of architectural, cultural or historical importance;

(10) Is an iconic landscape, garden, space or public view point that is significant to the history and heritage of the City; or

(11) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

[19] https://www.lagunabeachcity.net/government/departments/community-development/planning-zoning/historic-preservation

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the State of California and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[20] The California Register was enacted in 1992, and its regulations became official on January 1, 1998. The California Register is administered by the California Office of Historic Preservation (OHP). The criteria for eligibility for the California Register are based upon National Register criteria.[21] Certain resources are determined to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register. To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California or national history; or
3. It embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.[22]

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance.

Historic Significance and Integrity

Significance

The definition of historic significance used by the California Office of Historic Preservation (OHP) in its administration of the California Register is based upon the definition used by the National Park Service for the National Register:

[20] California Public Resources Code, Section 5024.1[a].
[21] California Public Resources Code, Section 5024.1[b].
[22] Criterion 4 addresses potential archaeological resources, which is outside the scope of this assessment.

Historic significance is defined as the importance of a property to the history, architecture, archaeology, engineering, or culture of a community, state, or the nation.[23] It is achieved in several ways:

- *Association with important events, activities or patterns*
- *Association with important persons*
- *Distinctive physical characteristics of design, construction, or form*
- *Potential to yield important information*

A property may be significant individually or as part of a grouping of properties.

Integrity

Historic integrity is the ability of a property to convey its significance and is defined as the "authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period."[24] The National Park Service defines seven aspects of integrity: *location, design, setting, materials, workmanship, feeling,* and *association*. These qualities are defined as follows:

- *Location* is the place where the historic property was constructed or the place where the historic event took place.
- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting* is the physical environment of a historic property.
- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time.

[23] *National Register Bulletin 16A. How to Complete the National Register Registration Form* (Washington D.C.: National Park Service, United States Department of the Interior 1997), 3.
[24] *National Register Bulletin 16A,* 3.

- *Association* is the direct link between an important historic event or person and a historic property.[25]

To retain historic integrity a property will always possess several, and usually most, of the aspects. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity.

HISTORIC RESOURCE ASSESSMENT

The single-family residential building at 32051 Coast Highway was constructed in South Laguna in 1948. The following evaluation will determine if the property is eligible to be placed in the Laguna Beach Historic Register and/or the California Register of Historical Resources.

Evaluation of Significance

Laguna Beach Historic Register

The single-family residence at 32051 Coast Highway is not currently listed in the Laguna Beach Historic Register. To be placed in the Register it must meet the revised criteria for designation as noted above.

(1) The owner of the property voluntarily agrees to the placement on the register;

Criterion (1): The owner has not submitted, nor wishes to submit, an application for placement on the Laguna Beach Historic Register. Therefore, the property does not satisfy requirements for Criterion (1).

According to the revised ordinance, if the property owner does not voluntarily agree to placement in the local register the property does not meet Criterion 1, and to be found eligible for the register the property must, at a minimum, meet Criterion 1. No other criteria need to be met so the property is found ineligible for listing in the Laguna Beach Historic Register.

California Register of Historical Resources

1. *Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.*

Criterion 1: The property does not represent character, interest and value as part of the heritage of the city. It is located within the South Laguna neighborhood, but because it was

[25] *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (Washington D.C.: National Park Service, United States Department of the Interior, 2002).

constructed in 1948 it is not representative of the early development of the subdivision which began in 1927. No documentation was found to indicate the property was the site of a significant historic event. The property does not meet Criteria 1.

2. *Associated with the lives of persons important to local, California or national history.*

Criterion 2: The property is associated with Carl Hoerman who built this single-family residence. Hoerman was an architect and artist who began visiting Southern California in the late 1930s to escape the mid-western winters. His primary residence was located in Saugatuck, Michigan, and this residence served as a secondary home that he and his wife occupied for less than one year after its completion. It was sold to the Mr. and Mrs. William Duckham in 1951. The Duckhams occupied the house for several years and were actively involved in the Laguna Beach arts community; however, it does not appear that the Hoermans nor the Duckhams were significantly involved in city affairs. In addition, no documentation was found to indicate that any of the subsequent owners of the property contributed to the development or culture of South Laguna or Laguna Beach. The property does not meet Criteria 2.

3. *Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.*

Criterion 3: The single-family residence lacks a clearly defined architectural style. It could be representative of the Minimal Traditional style; however, it lacks most of the typical character-defining features of the style. The house was designed by architect and artist Carl Hoerman. Hoerman was a licensed architect in Chicago where most of his works consisted of private homes and a few commercial buildings. He built three houses in California for his wife and himself, but nothing of architectural merit. Hoerman is known nationally as an artist rather than an architect. Therefore, the house does not embody distinctive characteristics or represent a work of a master architect. The property does not meet Criteria 3.

4. *Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.*

Criterion 4: This criterion addresses potential archaeological resources, which is outside the scope of this assessment.

Evaluation of Integrity

As noted above, the house is not historically or architecturally significant. It has no important associations and lacks a clearly defined architectural style. It has no association with important events or with important persons and does not display distinctive physical characteristics of design, construction, or form.

Integrity is based on significance. Because the property was found to lack historical and architectural significance it is not necessary to evaluate its physical integrity.

CONCLUSION

Based on the findings of this assessment 32051 Coast Highway is not historically or architecturally significant. It does not exemplify a particular architectural style or way of life important to the city; nor was it the site of a significant historic event or was identified with a person or persons or groups who significantly contributed to the culture and development of the city; nor embodies elements of outstanding attention to architectural design, detail, materials or craftsmanship. In addition, the property owner does not voluntarily agree to the placement in the historic register. Therefore, the property is not eligible to be placed in the Laguna Beach Historic Register or the California Register of Historical Resources.

In the City of Laguna Beach, because the building is not eligible for listing in the Laguna Beach Historic Register or for listing in the California Register, it is not considered a historic resource for the purposes of the California Environmental Quality Act (CEQA).

"Art Exhibit at Playhouse, Hymn in Priase of Pacific," *Pittsburgh Post-Gazette,* May 4, 1954.

California Voter Registration records for 1950, 1952, 1954, 1956 and 1958 on Ancestry.com, accessed February 28, 2020.

"Carl Meads to Occupy Home of Carl Hermans," *South Coast News*, May 19, 1949.

Census records for 1910, 1920, 1930, 1940 on Ancestry.com, accessed March 11, 2020.

City of Laguna Beach building and planning records.

City of Laguna Beach Historic Preservation Ordinance. Laguna Beach Municipal Code Chapter 25.45 Historic Preservation.

"City of Laguna Beach Historic Resources Element." (Resolution No. 06.006) Adopted July 1981. Amendment adopted by Laguna Beach City Council, January 10, 2006.

"City of Laguna Beach Historic Resources Inventory." (Resolution 82.111) Adopted by the Laguna Beach City Council, December 21, 1982.

"Community Hospital given Hoerman Memorial Paintings," *Holland Evening Sentinel* (Holland, Michigan), May 8, 1959.

"DAR Officers Meet at Duckham Home Saturday Evening," Laguna Beach Post, July 12, 1951.

"Obituary: Duckham," *Pittsburgh Press* (Pittsburgh, Pennsylvania), July 2, 1964.

"Festival of Arts," *South Coast News*, January 10, 1950

"Laguna" Ad, *Los Angeles Times,* April 7, 1949.

"Local Fighter Cited and Given Captaincy," *Pittsburgh Press* (Pittsburgh, Pennsylvania), October 2, 1918.

"Jean Duckham Shows Paintings," *South Coast News*, November 25, 1954.

"Just South of Laguna," *South Coast News,* November 8, 1957.

Merrill, Peter C. "Carl Hoerman, Painter of the Desert." *Southern California Quarterly,* Vol. 73, No. 3 (FALL 1991), pp. 279.286. University of California Press. Accessed via JSTOR.org on March 6, 2020.

"Mrs. Jean Duckham Passes Away," *South Coast News*, August 15, 1963.

National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Washington, D.C.: U.S. Department of the Interior, National Park Service, revised for internet 2002.

National Register Bulletin 16A: How to Complete the National Register Registration Form. Washington D.C.: U.S. Department of the Interior, National Park Service, 1997.

Orange County Archives.

"Pittsburgh Soldiers Cited for Bravery on French Front," *Pittsburgh Daily Post* (Pittsburgh, Pennsylvania), October 3, 1918.

Palm Springs City Directory, 1946

"Saugatuck Artist Leaves for Europe," *Unionville Crescent* (Unionville, Michigan), May 27, 1927.

"Son Willed $40,000 Estate," *Pittsburgh Sun-Telegraph.* August 7, 1946.

Special Research Collections, UCSB Library, University of California Santa Barbara; Aerial Photography Collection. Laguna Beach [air photo]. 1:7,200. Flight ID C-1130. Frame 4-83. Laguna Beach, Calif. 1947.

-----. Laguna Beach [air photo]. 1:20,000. Frame 2k-129. Flight ID AXK-1953. Laguna Beach, Calif. 1952.

-----. Laguna Beach [air photo]. 1:6,000. Flight ID PAI-33v-1. Frame 25. Laguna Beach, Calif. 1960.

State of California Department of Parks and Recreation. "South Laguna." Historic Resources Inventory form. Prepared by Environmental Coalition, May 1981.

U. S. Naturalization Records Index – Illinois, Indiana, Wisconsin and Iowa for Carl Hoerman. Accessed via Ancestry.com on March 6, 2020.

"VA Loan Officer Entering Industry," *Pittsburgh Sun-Telegraph* (Pittsburgh, Pennsylvania), October 28, 1948.

World War II Compensation Application for William A. Duckham, April 15, 1950.

World War II Draft Registration Card for Carl Hoerman. 1942.

There is no original building permit on file for this property. It was built under Orange County jurisdiction.

Date	Permit No.	Owner	Contractor	Description of work
2004-08-23	B04-1791	Catherine H. Sumner	Bid Electric	[EXPIRED] Electrical Permit – Overhead to underground conversion with new 200-amp service meter, per Edison-approved plans.
2007-01-24	B04-1791	Catherine Sumner	Bid Electric	[EXPIRED] Electrical Permit – Overhead to underground electrical conversion
2010-11-23	BP10-02037	Catherine Sumner	Fargo Communications Inc. (Mike Fargo)	Electrical Permit – Replace damaged Cox cable pedestal per Joe Chiqute
2017-09-11	ELEC-2017-1648	Dan Sumner	Frank Hufnagel	Electrical Permit – Reissue expire permit 04-1791 for final inspection – Overhead to underground conversion with new 200-amp service meter, per Edison-approved palns. *rough inspections '04.

CHAIN OF TITLE

32051 Coast Highway, Laguna Beach 92651

Legal Description: a part of Lot 1 of Section 8, Township 8, Range 8 West, S.B.B. & M. Beginning at a point in the SW line of that certain 80'right of way as deeded to the State of California by deed recorded in Bk 592, page 103 of Deeds, records of Orange County, said point being located 75.42' SE along the arc of a curve of radius of 1460' concave to the SW from a concrete monument marking a point 40' S 53 degrees 07' 30" W of the end of the third course, namely the S 36 degrees 52' 30" E as cited in said Deed; running thence along said SW right of way line 50' SE along the arc of a curve of radius 1460'concave to the SW to a point; thence S 59 degrees 21' 30" W 437', more or less, to a pint in the line of ordinary high tide of the Pacific Ocean; thence NW along the line of ordinary high tide to a point 450' S 59 degrees 21' 30" W from the point of beginning; thence N 59 degrees 21' 30" W from the point of beginning; thence N 59 degrees 21' 30" E 450' to the point of beginning, being a part of Lot 31 of Three Arches Palisades No. 2, as per map thereof recorded in Book 3, pages 16 and 17 of Record of Surveys, records of said Orange County.

EXCEPT any portion of said land which at any time was tide land, which was not formed by the deposit of alluvium from natural causes and by imperceptible degrees.

09/24/1926: Agreement between Blanch Dolph (and Henry Barbour) to sell about 100 acres, including Lot 1 S8 T8 R8 to THE WHITING COMPANY; Deeds 678/198

05/12/1927: The Whiting Company to BANK OF ITALY NATIONAL TRUST AND SAVINGS ASSOCIATION; OR 351/41

05/28/1927: NOTICE THAT OWNER WILL NOT BE RESPONSIBLE FOR IMPROVEMENTS, Exhibit "A", Bank of Italy; OR48/373

02/21/1928: Bank of Italy National Trust and Savings Association to Arthur ST. VINCENT BURNABY; OR 136/80

03/18/1941: Estate of Harry Arthur Gustavus St. Vincent Burnaby to Elmer C. and Pauline M. NEHER; OR 1084/311

01/21/1943: Elmer C. and Paulin M. Neher to Carl and Christiana A. HOERMAN; OR 1176/271

01/30/1951: Carl and Christina Hoerman to William A. and Jean N. DUCKHAM; OR 2136/487

12/01/1958: William A. and Jean N. Duckham to James B and Hazel D. HUDSON; OR 4498/200

08/17/1971: Hazel D. Hudson to Hazel D. HUDSON and Catharine H. SUMNER, as joint tenants; OR 9765/95

06/26/1980: Catharine H. and Gay A. Sumner to Catharine H. SUMNER, Trustee under Trust dated 9/20/1977.

03/10/2009: Affidavit-Death of Trustee, Catharine H. Sumner to Donald SUMNER, Successor Trustee

05/10/2009: Grant deed from Donald Sumner, Successor Trustee to Donald SUMNER

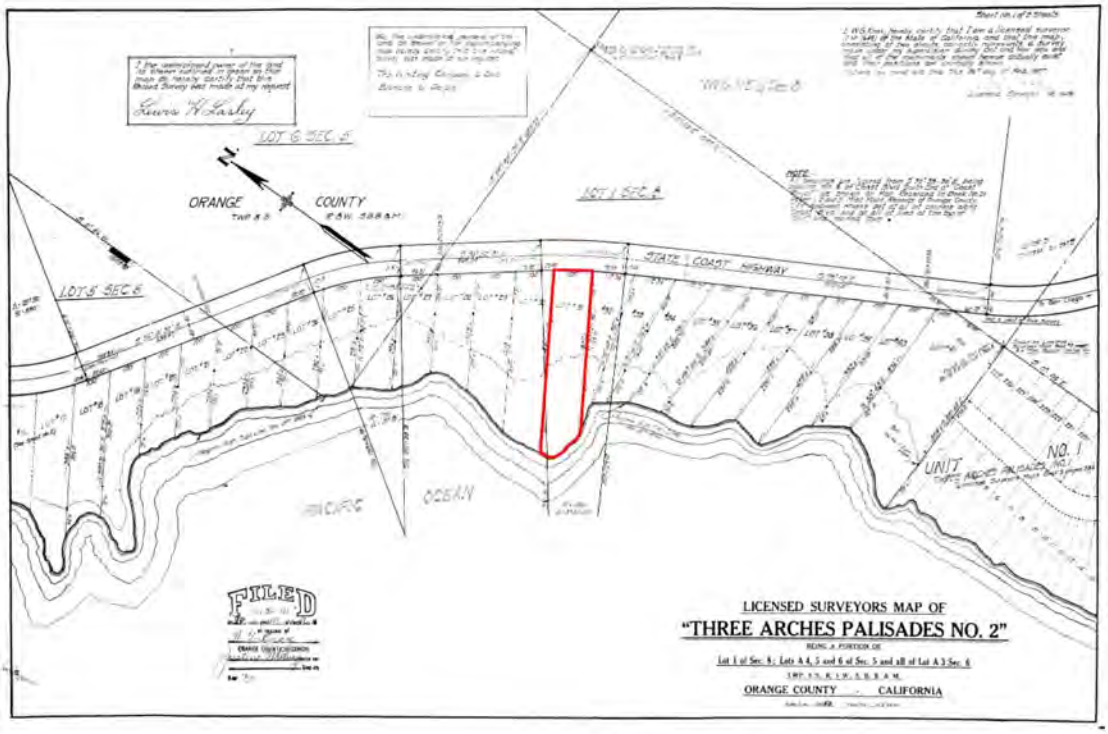
10/02/2017: Donald Sumner, Successor Trustee of The Sumner Trust dated 9/20/1977 to Chuck Truc Tron LE, as Trustee of The Chuck Truc Tron Le Trust.

10/24/2017: Chuck Truc Tron Le, Trustee to Chuck Truc Trong Le, Trustee and Christine Chung, as joint tenants

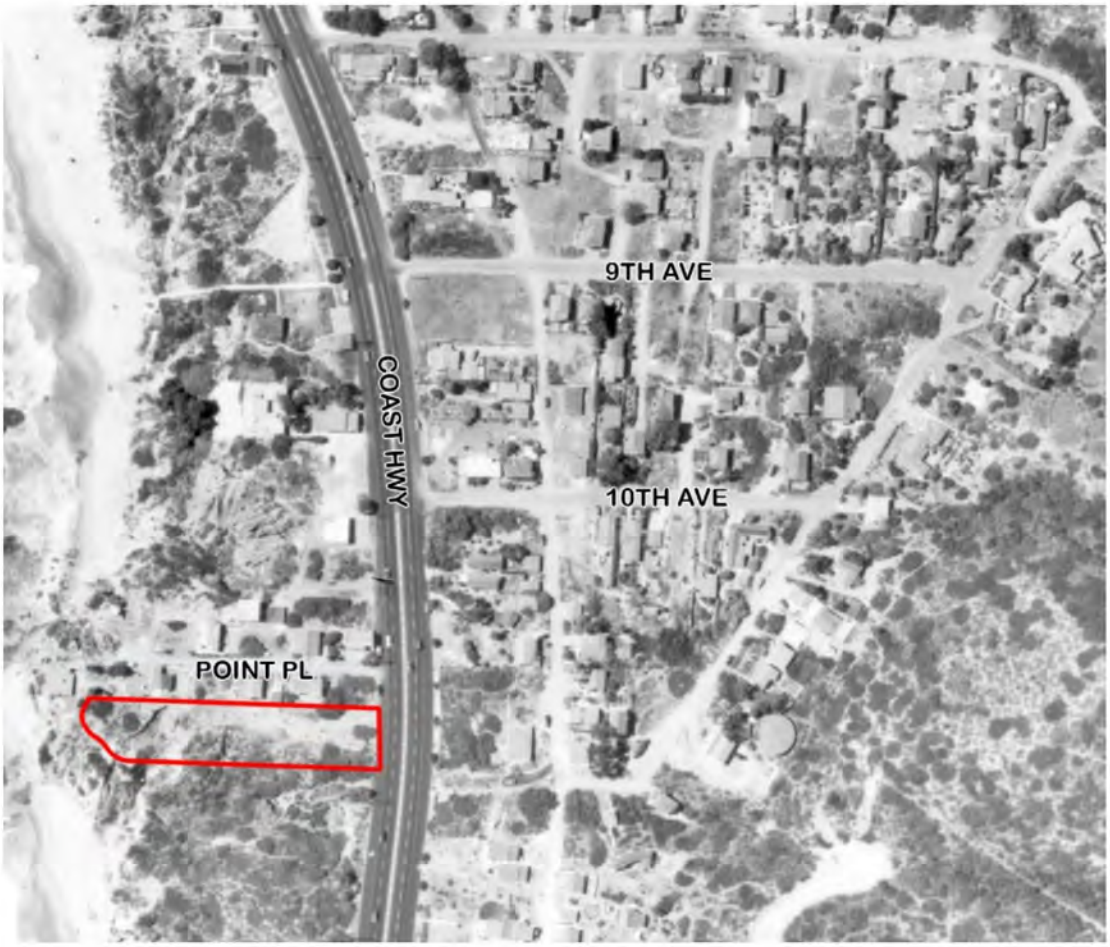
ASSESSMENT RECORDS

1934: 0 improvements
1942: 0 improvements
1943: 0 improvements
1946: 0 improvements
1947: 0 improvements
1948: Improvements at assessed value of $2240.

Chain of Title for 32051 Coast Highway. (Orange County Archives)



Tract map of Three Arches Palisades No. 2 subdivision with subject property outlined in red, 1927. (Orange County Public Works)



Aerial photograph with subject property outlined in red, 1947. Note the property is vacant. (Special Research Collections, UCSB Library, University of California Santa Barbara)

Aerial photograph with subject property outlined in red, 1952. (Special Research Collections, UCSB Library, University of California Santa Barbara)

Aerial photograph with subject property outlined in red, 1960. (Special Research Collections, UCSB Library, University of California Santa Barbara)

Aerial photograph with subject property outlined in red, 1968. Note addition at southwest corner of house. (Special Research Collections, UCSB Library, University of California Santa Barbara)

EXISTING CONDITIONS PHOTOGRAPHS

The following photographs of 32051 Coast Highway were taken by Historic Resources Group on February 24, 2020.

View of front yard and driveway with residence in the background, facing west.

South (primary) and east façade from driveway, facing northwest.

View of the east façade, facing west.

View of the garage entrance on the south façade, facing northwest.

View of the primary entrance on the south façade, facing west.

Detail of the primary entrance on the south façade, facing west.

Detail of courtyard, facing northeast.

Detail of courtyard windscreen with canopy, facing southwest.

Detail of courtyard windscreen with canopy, facing northeast.

View of the west façade showing triangular bay window and addition with balcony, facing east.

Detail of addition with cantilevered balcony on the west facade, facing southeast.

Detail of triangular bay window on west facade, facing east.

Detail of brick path and painted brick chimney on north facade, facing east.

View of the north façade with variety of original and replacement windows, facing southeast.

P1. Other Identifier:
***P2. Location:** ☐ Not for Publication ■ Unrestricted
***a. County:** Orange County
***b. USGS 7.5' Quad:** Dana Point **Date:** 2022 **T** ; **R** ; **¼ of** **¼ of Sec** **;** M.D. **B.M.**
c. Address: 32051 Coast Highway **City:** Laguna Beach **Zip:** 92651
d. UTM: Zone: 11S; 431291 **mE/** 3706414 **mN** (G.P.S.)
e. Other Locational Data: APN: 056-160-25; Latitude 33.49674, Longitude -117.73965
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The single-family residence with attached garage at 32051 Coast Highway is located on the west side of Coast Highway between Point Place and North Portola on lot 31 in the Three Arches Bay Tract. The lot is on a bluff that overlooks that Pacific Ocean. It is flanked to the north by a small single-family residential subdivision and to the south by a large single-family residence. The residence is set-back deeply from the street and is accessed by a long paver stone driveway with a landscaped yard to the south. The house is situated at the west end of the parcel and is enclosed by a stucco wall with a wood gate that is attached to the garage. The wood gate accesses a courtyard with stone paving and planter beds. There are entrances to the garage and residence from the courtyard, and there is a wood framed windscreen with fixed windows and with a shed roof. Past the windscreen, there is a set of brick steps that lead down to a paved brick pathway that goes around the house and has access to a wood framed balcony. From the pathway, there are concrete steppingstones that lead to the edge of the bluff.

The residence is one-story in height with an irregular rectangular plan and asymmetrical composition. It has simple massing with a multi-gabled roof, composition shingles and overhanging eaves with exposed rafter tails. The exterior walls are clad in sand finish cement plaster. Fenestration primarily consists of fixed wood picture windows with simple wood surrounds and projecting sills. There is an exterior brick chimney on the north facade and projecting balcony on the west facade. (See continuation sheet).

***P3b. Resource Attributes:** HP2. Single family property
***P4. Resources Present:** ■Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: East façade, facing west, 2020.

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both
1948, Orange County Assessor Records

***P7. Owner and Address:**
Chuck Truc Tron Le Trust
8 Canyon Rim
Newport Beach, CA 92657

***P8. Recorded by:**
Historic Resources Group
12 S Fair Oaks Avenue, Suite 200
Pasadena, CA 91105

***P9. Date Recorded:** October 2022

***P10. Survey Type:** Historic Assessment

***P11. Report Citation:** "Historic Resource Assessment: 32051 Coast Highway, Laguna Beach, California," Historic Resources Group, October 3, 2022.

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

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #:** 32051 Coast Highway

B1. Historic Name:
B2. Common Name:
B3. Original Use: Single-family residence
B4. Present Use: Single-family residence
***B5. Architectural Style:** Minimal Traditional
***B6. Construction History:** There is no original building permit but according to Orange County assessor records the single-family residence was constructed in 1948. Based on aerials, the addition to the rear of the property took place sometime in the mid-1960s. Visual observation indicates several windows and the front entry door have been replaced.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:** N/A
B9a. Architect: N/A
b. Builder: Carl Hoerman
***B10. Significance:** N/A **Theme:** N/A
Area: Laguna Beach
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A

HISTORIC CONTEXT

The single-family residence at 32051 Coast Highway is located in the South Laguna Bluffs neighborhood along Coast Highway in what is now the southern portion of the city. The residence was constructed in 1948 in the Three Arches Palisades No. 2 subdivision, which was subdivided in 1927. It has the potential to be significant for its association with the development of Laguna Beach and the South Laguna neighborhood, association with persons who may have made an impact to local history, or was the site of a historic local event, or for having distinctive characteristic of a particular architectural style.

South Laguna

South Laguna, originally a small, unincorporated beach community in Orange County, was annexed by the City of Laguna Beach in 1987. Homes in South Laguna are set into the hillside or perched on a cliff overlooking the beach. Few houses are situated on level lots, and the overwhelming majority of South Laguna homes are cottages and bungalows, hastily built as beach homes and continuously remodeled.

One of the original homesteaders in South Laguna was William Egan, who took up a claim extending from West Street to approximately 10th Avenue in 1907. In 1927, Dwight Whiting and Blanche Dolphe purchased the area, and named it Three Arches, for the Three Arches Bay. They hired Lewis Lasley as their tract manager and divided 120′ by 40′ parcels into thirds, creating the narrow lots that characterize the area. By popular vote, the area formerly known as Three Arches was renamed South Laguna in 1934.

Beach communities such as South Laguna were characterized by small beach cottages throughout their early history. Due to the corrosive nature of the sea air, building materials utilized near the beach require replacement over time, including wood sash windows or wood siding. Many residences were altered over time as needed to replace original materials and maximize the inhabitants' ability to enjoy the ocean view and sea breeze.

(See continuation sheet)

B11. Additional Resource Attributes: N/A
***B12. References:** (See continuation sheet)
B13. Remarks:

***B14. Evaluator:** Laura Janssen; Robby Aranguren
***Date of Evaluation:** October 2022

(This space reserved for official comments.)

P3a. Description (continued):

The front-facing garage has a metal overhead door with a wood frame and decorative wood header. The entrance to the garage is on the south façade. It has a wood paneled and partially glazed door with a simple surround. The door is flanked by divided light wood sash windows with a simple surround and projecting wood sills. The primary entrance to the residence is also located on the south façade. It has a single paneled composition door with a simple surround and wood screen. It is flanked by fixed wood sidelights with reeded glazing. There is an addition at the southwest corner of the house with board-and-batten wood siding, a low sloping shed roof, fixed picture windows, a cantilevered wood balcony, and a wide overhanging eave. On the west façade, there is a prominent triangular bay window with wood framed picture windows supported by a wood post. The north façade has a variety of fixed and operable wood framed and vinyl/metal replacement windows.

B10. Significance (continued):

Minimal Traditional Architecture

The Minimal Traditional style is defined by a single-story configuration, simple exterior forms, and a restrained use of traditional architectural detailing. The Minimal Traditional house was immensely popular in large suburban residential developments throughout the United States during the 1940s and early 1950s. The style had its origins in the principles of the Modern movement and the requirements of the FHA and other Federal programs of the 1930s. Its open plan reflected the developer's desire for greater efficiency. Modern construction methods addressed the builder's need to reduce costs and keep homes affordable to the middle class. Conventional detailing appealed to conservative home buyers and mortgage companies. In Southern California, the style is closely associated with large-scale residential developments of the World War II and postwar periods. Primarily associated with the detached single-family house, Minimal Traditional detailing may also be applied to apartment buildings of the same period.

Typical character-defining features include:

- One-story configuration
- Rectangular plan
- Medium or low-pitched hip or side-gable roof with shallow eaves
- Smooth stucco wall cladding, often with wood lap or stone veneer accents
- Wood multi-light windows (picture, double-hung sash, casement)
- Projecting three-sided oriel
- Shallow entry porch with slender wood supports
- Wood shutters
- Lack of decorative exterior detailing

Carl Hoerman (1885-1955)

Carl Hoerman was born in Babenhausen, Bavaria, Germany in 1885 to Simon and Theresia Hoerman. He was one of several children. His father was a draftsman and cabinetmaker who began training him at a young age in the woodcarving business. During this time, Hoerman picked up drawing and was primarily self-taught. It is believed that he had attracted the attention of Prince Carl Fugger, the lord of the castle at Babenhausen, who sponsored his studies for art in Munich. However, there are no records of Hoerman attending any art schools.

In 1904 at the age of nineteen, Hoerman emigrated to the United States from Hamburg, Germany. He arrived in New York and eventually made his way to Chicago, his final destination. In Chicago, he began working in factories during the day and attended architecture classes in the evenings. A few years later he began working for a number of architectural firms including Richard A. Paddock and Company, Louis Guenzel, and Marshall and Fox. During this time, he met a young woman named Christiana Ackermann, whom he married in 1907. She was an artist that specialized in still life painting. The two spent their honeymoon at a resort in Saugatuck, Michigan and fell in love with its beauty. In 1908, Hoerman became a licensed architect and began his own practice the following year. Most of his works included private homes and a few commercial buildings. By 1910, he became a naturalized citizen of the United States. The couple remained in Chicago until 1920 when they moved to Saugatuck, Michigan.

In Saugatuck, the Hoermans settled down and made this city their primary residence. Hoerman began to focus more on his love for painting rather than architecture. He built his own home and studio here known as the Chalet. The property was located on a bluff that overlooked the Kalamazoo River. At this time, his work focused on landscape paintings, specifically the sand dunes of Saugatuck, which he immortalized. In the wintertime, Hoerman and his wife began to explore more of the southwest with frequent trips to Arizona and California where he found more inspiration from places like the Grand Canyon. (continued)

B10. Significance (continued):

By the 1930s, cities like Flagstaff, Riverside, and Rancho Mirage became annual pilgrimages for the Hoermans. In 1939, they built a house they named Casa Sierra Vista in Riverside, which they sold to an old friend from Chicago in 1944. After selling the home, they began spending time in Rancho Mirage and in the Orange County area. In 1943, they bought land in South Laguna on a cliff overlooking the Pacific Ocean. However, they did not decide to develop it until years later. Instead, they were living in Rancho Mirage and built a house they named Casa del Desierto in 1946. It was not until 1948 when they decided to construct a house on their property in South Laguna at 32051 Coast Highway. They occupied the house for less than one year before ultimately moving back to Michigan. They sold the house to William and Jean Duckham in 1951.

Although the couple wished to stay in California, it was not feasible for them to do so as artists. Saugatuck provided steady income for them as the artist colony grew in that city. By the 1950s, Hoerman's health began to decline, and these trips became less frequent. In 1955, he passed away in Douglas, Michigan.

William A. Duckham (1894-1964)

William A. Duckham was born in Pittsburgh, Pennsylvania in 1894 to Albert and Mary Duckham. He was an only child and spent most of his young adulthood in Pennsylvania. In 1914, he left to attend Cornell University in Ithaca, New York and graduated in 1917. He enlisted in the U.S. Marine Corps that year and was commissioned as a second lieutenant by President Wilson. After four months, he quickly rose in the ranks and was promoted to first lieutenant. Less than one year later, he was promoted to captain. For his service, he received wound stripes for his injuries and the Croix de Guerre in World War I. In 1919, he was honorably discharged at the Philadelphia Navy Yard and returned to civilian life in Pittsburgh. In 1920, he was working as a salesman in the steelworks industry. In 1923, he married Miss Jean Nieman. Miss Nieman was a local girl who graduated from Thurston Preparatory School and Ogontz School for Young Ladies. In the 1930s, Duckham began to work as a stockbroker in the Pittsburgh Stock Exchange for several companies including Moore, Leonard & Lynch and Gammack & Company. He eventually opened his own investment firms W.A. Duckham & Co and then Duckham & Hackett. The latter dissolved in 1940. In 1942, Duckman registered for the World War II draft and became a commander in the U.S. Navy. His mother also passed away that year. In 1944, he was honorably discharged. By 1945, he was working as the head of the Loan Division of the Pittsburgh Regional Veterans' Affairs office as a loan guarantee officer. He worked there until 1948 when he decided to enter the private industry. During that time, his father passed away and left him the remainder of his estate.

In 1948, the Duckhams left Pittsburgh and moved to Laguna Beach, California and settled in the Emerald Bay neighborhood. Duckham's interest in Laguna Beach led him to enter the real estate business, and with his background in business, Duckham was appointed as an interim board member for the Festival of Arts. Following suit, Mrs. Duckham was also invested in the liberal arts and eventually picked up painting. She was a member of Laguna Beach Art Association and the Patience Wright Chapter of the Daughters of the American Revolution (DAR). In 1951, they purchased the house at 32051 Coast Highway, which became their primary residence. Their home was used to entertain many guests as well as host meetings for several organizations including the Patience Wright chapter of the DAR. The home also became a studio and inspiration for Mrs. Duckham. Her paintings of the California coast were displayed at art exhibits in Laguna Beach, Pasadena and Pittsburgh. The Duckhams only lived in the house for little over seven years. They put the house on the market in 1957 so they could travel more and split their time between living on the coast and in the desert. The house sold in 1958 to James and Hazel Hudson. In 1963, Mrs. Duckham passed away, and the following year Mr. Duckham became ill and passed away in Laguna Beach, California.

Development History

In 1926, Blanche Dolph sold about 100 acres, including Lot 1 of Section 8, which included 32051 Coast Highway, to the Whiting Company. Afterwhich she formed a partnership with Dwight Whiting to subdivide the area. In 1927, they hired Lewis Lasley to lay out long narrow lots along the coast and named the development "Three Arches Palisades No. 2," which ultimately became known as Three Arches. Lot 31 was designated for 32051 Coast Highway. The same year, the Whiting Company sold the land to the Bank of Italy National Trust and Savings.

In 1928, the Bank of Italy sold the land to Arthur St. Vincent Burnaby. The lots along the coast remained largely underdeveloped with few residential properties. In 1934, Three Arches name changed to South Laguna. In 1939 Burnaby passed away and his estate was sold in 1941 to Elmer C. and Pauline M. Neher. Two years later, the Nehers sold the undeveloped land to Carl and Christiana Hoerman. Carl Hoerman, the architect turned artist, built a home on the property in 1948. The house was likely used as a winter home, and they ended up renting it after less than a year of use to Mr. and Mrs. Carl Mead. (continued)

B10. Significance (continued):

Development History (continued):

In 1951, the Hoermans sold the house to William A. and Jean N. Duckham. The Duckhams occupied the house for a little over seven years with no known improvements made to the property. In 1958, they sold it to James B. and Hazel D. Hudson. In 1962, Hudson's son, George was caught stockpiling an arsenal of weapons at his home in Eagle Rock and at his father's home in South Laguna. The guns were confiscated, and George received a two-year probation for violating the Federal arms act. In 1966, James Hudson passed away and his wife added their daughter Catherine H. Sumner to the title in 1971. No documented improvements were made during this ownership; however, it appears an unpermitted addition to the rear of the house was built during the mid-1960s. In 1973, Mrs. Hudson passed away and Catherine Sumner became the sole owner. She owned the property until her death in 2008, when the property was passed on to her son Donald Sumner. A permit was pulled in 2004 to convert the electrical system from overhead to underground with a new 200-amp service, but the permit expired. Donald Sumner had the permit reissued in 2017 and sold the property to current owners Chuck Truc Tron Le and Christine Chung.

Evaluation of Significance

Laguna Beach Historic Register

The single-family residence at 32051 Coast Highway is not currently listed in the Laguna Beach Historic Register. To be placed in the Register it must meet Criterion (1) and also one or more of Criteria (2) through (11) of the revised criteria for designation.

According to the revised ordinance, if the property owner does not voluntarily agree to placement in the local register, the property will not meet Criterion 1, and to be found eligible for the Register the property must, at a minimum, meet Criterion 1.

(1) The owner of the property voluntarily agrees to the placement on the register;

Criterion (1): The owner has not submitted an application for placement on the Laguna Beach Historic Register. Therefore, the property does not satisfy requirements for Criterion (1).

(2) It is listed on the National Register or the State Register;

Criterion (2): The property is not listed in the National or State Register. It does not meet Criterion 2.

(3) It exemplifies the cultural, political, economic, social or historical heritage of the community;

Criterion (3): The property does not exemplify cultural, political, economic, social or historical heritage to the community. It does not meet Criterion 3.

(4) It is identified with a person, events, culture or site significant in local, state or national history;

Criterion (4): The property is not identified with a person, event, culture, or significant site in local state, or national history. It does not meet Criterion 4.

(5) It is representative of the work of a notable builder, designer, architect, or artist including those of local importance;

Criterion (5): The property does not represent the work of notable builder, designer, architect or artist including those of local importance. It does not meet Criterion 5.

(6) It embodies distinguishing architectural characteristics of a style, type, period or method of construction that exemplify a particular architectural style or way of life important to the City;

Criterion (6): The property does not embody distinguishing architectural characteristics of a style, type , period, or method of construction that exemplifies a particular architectural style or way of life important to the city. It does not meet Criterion 6.

(7) It embodies elements that represent a significant structural, engineering, or architectural achievement or innovation;

Criterion (7): The property does not elements that represent significant structural, engineering, or architectural achievement or innovovation. It does not meet Criterion 7.

(8) It has a unique location, a singular physical characteristic, or is an iconic visual feature or public view point within the City;

Criterion (8): The property does not have a unique location, a singular physical characteristic, or an iconic visual feature or public view point within the City. It does not meet Criterion 8.

(continued)

B10. Significance (continued):

Laguna Beach Historic Register (continued)

(9) Is one of the remaining examples in the City, region, state or nation possessing distinguishing characteristics of architectural, cultural or historical importance;

Criterion (9): The property is not one of the ramining examples in the City, region, state, or nation possessing distinguishing characteristics of architectural, cultural or historical importance. It does not meet Criterion 9.

(10) Is an iconic landscape, garden, space or public view point that is significant to the history and heritage of the City; or

Criterion (10): The property is not an iconic landscape, garden, space, or public view point that is significant to the history and heritage of the City. It does not meet Criterion 10.

(11) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Criterion (11): This criterion addresses potential archaeological resources, which is outside the scope of this assessment.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the State of California and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." To be eligible for the California Register, a historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

Criterion 1: The property does not represent character, interest and value as part of the heritage of Laguna Beach. It is located within the South Laguna neighborhood, but because it was constructed in 1948 it is not representative of the early development of the subdivision which began in 1927. No documentation was found to indicate the property was the site of a significant historic event. The property does not meet Criteria 1.

2. Associated with the lives of persons important to local, California or national history.

Criterion 2: The property is associated with Carl Hoerman who built this single-family residence. Hoerman was an architect and artist who began visiting Southern California in the late 1930s to escape the mid-western winters. His primary residence was located in Saugatuck, Michigan, and this residence served as a secondary home that he and his wife occupied for less than one year after its completion. It was sold to the Mr. and Mrs. William Duckham in 1951. The Duckhams occupied the house for several years and were actively involved in the Laguna Beach arts community; however, it does not appear that the Hoermans nor the Duckhams were significantly involved in city affairs. In addition, no documentation was found to indicate that any of the subsequent owners of the property contributed to the development or culture of South Laguna or Laguna Beach. The property does not meet Criteria 2.

3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.

Criterion 3: The single-family residence lacks a clearly defined architectural style. It could be representative of the Minimal Traditional style; however, it lacks most of the typical character-defining features of the style. The house was designed by architect and artist Carl Hoerman. Hoerman was a licensed architect in Chicago where most of his works consisted of private homes and a few commercial buildings. He built three houses in California for his wife and himself, but nothing of architectural merit. Hoerman is known nationally as an artist rather than an architect. Therefore, the house does not embody distinctive characteristics or represent a work of a master architect. The property does not meet Criteria 3.

4.Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Criterion 4: This criterion addresses potential archaeological resources, which is outside the scope of this assessment.

(continued)

B10. Significance (continued):

Conclusion

Based on the findings of this assessment 32051 Coast Highway is not historically or architecturally significant. It does not exemplify a particular architectural style or way of life important to the city; nor was it the site of a significant historic event or was identified with a person or persons or groups who significantly contributed to the culture and development of the city; nor embodies elements of outstanding attention to architectural design, detail, materials or craftsmanship. In addition, the property owner does not voluntarily agree to the placement in the historic register. Therefore, the property is not eligible to be placed in the Laguna Beach Historic Register or the California Register of Historical Resources.

In the City of Laguna Beach, because the building is not eligible for listing in the Laguna Beach Historic Register or for listing in the California Register, it is not considered a historic resource for the purposes of the California Environmental Quality Act (CEQA).

B12. References:

"Art Exhibit at Playhouse, Hymn in Priase of Pacific," *Pittsburgh Post-Gazette,* May 4, 1954.

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"Carl Meads to Occupy Home of Carl Hermans," *South Coast News*, May 19, 1949.

Census records for 1910, 1920, 1930, 1940 on Ancestry.com, accessed March 11, 2020.

City of Laguna Beach building and planning records.

City of Laguna Beach Historic Preservation Ordinance. Laguna Beach Municipal Code Chapter 25.45 Historic Preservation.

"City of Laguna Beach Historic Resources Element." (Resolution No. 06.006) Adopted July 1981. Amendment adopted by Laguna Beach City Council, January 10, 2006.

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"Community Hospital given Hoerman Memorial Paintings," *Holland Evening Sentinel* (Holland, Michigan), May 8, 1959.

"DAR Officers Meet at Duckham Home Saturday Evening," Laguna Beach Post, July 12, 1951.

"Obituary: Duckham," *Pittsburgh Press* (Pittsburgh, Pennsylvania), July 2, 1964.

"Festival of Arts," *South Coast News*, January 10, 1950

"Laguna" Ad, *Los Angeles Times,* April 7, 1949.

"Local Fighter Cited and Given Captaincy," *Pittsburgh Press* (Pittsburgh, Pennsylvania), October 2, 1918.

"Jean Duckham Shows Paintings," *South Coast News*, November 25, 1954.

"Just South of Laguna," *South Coast News,* November 8, 1957.

Merrill, Peter C. "Carl Hoerman, Painter of the Desert." *Southern California Quarterly,* Vol. 73, No. 3 (FALL 1991), pp. 279.286. University of California Press. Accessed via JSTOR.org on March 6, 2020.

"Mrs. Jean Duckham Passes Away," *South Coast News*, August 15, 1963.

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National Register Bulletin 16A: How to Complete the National Register Registration Form. Washington D.C.: U.S. Department of the Interior, National Park Service, 1997.

Orange County Archives.

"Pittsburgh Soldiers Cited for Bravery on French Front," Pittsburgh Daily Post (Pittsburgh, Pennsylvania), October 3, 1918.

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"Saugatuck Artist Leaves for Europe," *Unionville Crescent* (Unionville, Michigan), May 27, 1927.

"Son Willed $40,000 Estate," *Pittsburgh Sun-Telegraph*. August 7, 1946.

Special Research Collections, UCSB Library, University of California Santa Barbara; Aerial Photography Collection. Laguna Beach [air photo]. 1:7,200. Flight ID C-1130. Frame 4-83. Laguna Beach, Calif. 1947.

-----. Laguna Beach [air photo]. 1:20,000. Frame 2k-129. Flight ID AXK-1953. Laguna Beach, Calif. 1952.

-----. Laguna Beach [air photo]. 1:6,000. Flight ID PAI-33v-1. Frame 25. Laguna Beach, Calif. 1960.

State of California Department of Parks and Recreation. "South Laguna." Historic Resources Inventory form. Prepared by Environmental Coalition, May 1981.

U. S. Naturalization Records Index – Illinois, Indiana, Wisconsin and Iowa for Carl Hoerman. Accessed via Ancestry.com on March 6, 2020.

"VA Loan Officer Entering Industry," Pittsburgh Sun-Telegraph (Pittsburgh, Pennsylvania), October 28, 1948.

World War II Compensation Application for William A. Duckham, April 15, 1950.

World War II Draft Registration Card for Carl Hoerman. 1942.

ADDITIONAL DOCUMENTATION

PERMIT HISTORY

There is no original building permit on file for this property. It was built under Orange County jurisdiction.

Date	Permit No.	Owner	Contractor	Description of work
2004-08-23	B04-1791	Catherine H. Sumner	Bid Electric	[EXPIRED] Electrical Permit – Overhead to underground conversion with new 200-amp service meter, per Edison-approved plans.
2007-01-24	B04-1791	Catherine Sumner	Bid Electric	[EXPIRED] Electrical Permit – Overhead to underground electrical conversion
2010-11-23	BP10-02037	Catherine Sumner	Fargo Comm.	Electrical Permit – Replace damaged Cox cable pedestal per Joe Chiqute
2017-09-11	ELEC-2017-1648	Dan Sumner	Frank Hufnagel	Electrical Permit – Reissue expire permit 04-1791 for final inspection – Overhead to underground conversion with new 200-amp service meter, per Edison-approved palns. *rough inspections '04

Chain of Title for 32051 Coast Highway. (Orange County Archives)

32051 Coast Highway, Laguna Beach 92651

Legal Description: a part of Lot 1 of Section 8, Township 8, Range 8 West, S.B.B. & M. Beginning at a point in the SW line of that certain 80'right of way as deeded to the State of California by deed recorded in Bk 592, page 103 of Deeds, records of Orange County, said point being located 75.42' SE along the arc of a curve of radius of 1460' concave to the SW from a concrete monument marking a point 40' S 53 degrees 07' 30" W of the end of the third course, namely the S 36 degrees 52' 30" E as cited in said Deed; running thence along said SW right of way line 50' SE along the arc of a curve of radius 1460'concave to the SW to a point; thence S 59 degrees 21' 30" W 437', more or less, to a pint in the line of ordinary high tide of the Pacific Ocean; thence NW along the line of ordinary high tide to a point 450' S 59 degrees 21' 30" W from the point of beginning; thence N 59 degrees 21' 30" W from the point of beginning; thence N 59 degrees 21' 30" E 450' to the point of beginning, being a part of Lot 31 of Three Arches Palisades No. 2, as per map thereof recorded in Book 3, pages 16 and 17 of Record of Surveys, records of said Orange County.

EXCEPT any portion of said land which at any time was tide land, which was not formed by the deposit of alluvium from natural causes and by imperceptible degrees.

09/24/1926: Agreement between Blanch Dolph (and Henry Barbour) to sell about 100 acres, including Lot 1 S8 T8 R8 to THE WHITING COMPANY; Deeds 678/198

05/12/1927: The Whiting Company to BANK OF ITALY NATIONAL TRUST AND SAVINGS ASSOCIATION; OR 351/41

05/28/1927: NOTICE THAT OWNER WILL NOT BE RESPONSIBLE FOR IMPROVEMENTS, Exhibit "A", Bank of Italy; OR48/373

02/21/1928: Bank of Italy National Trust and Savings Association to Arthur ST. VINCENT BURNABY; OR 136/80

03/18/1941: Estate of Harry Arthur Gustavus St. Vincent Burnaby to Elmer C. and Pauline M. NEHER; OR 1084/311

01/21/1943: Elmer C. and Paulin M. Neher to Carl and Christiana A. HOERMAN; OR 1176/271

01/30/1951: Carl and Christina Hoerman to William A. and Jean N. DUCKHAM; OR 2136/487

12/01/1958: William A. and Jean N. Duckham to James B and Hazel D. HUDSON; OR 4498/200

08/17/1971: Hazel D. Hudson to Hazel D. HUDSON and Catharine H. SUMNER, as joint tenants; OR 9765/95

06/26/1980: Catharine H. and Gay A. Sumner to Catharine H. SUMNER, Trustee under Trust dated 9/20/1977.

03/10/2009: Affidavit-Death of Trustee, Catharine H. Sumner to Donald SUMNER, Successor Trustee

05/10/2009: Grant deed from Donald Sumner, Successor Trustee to Donald SUMNER

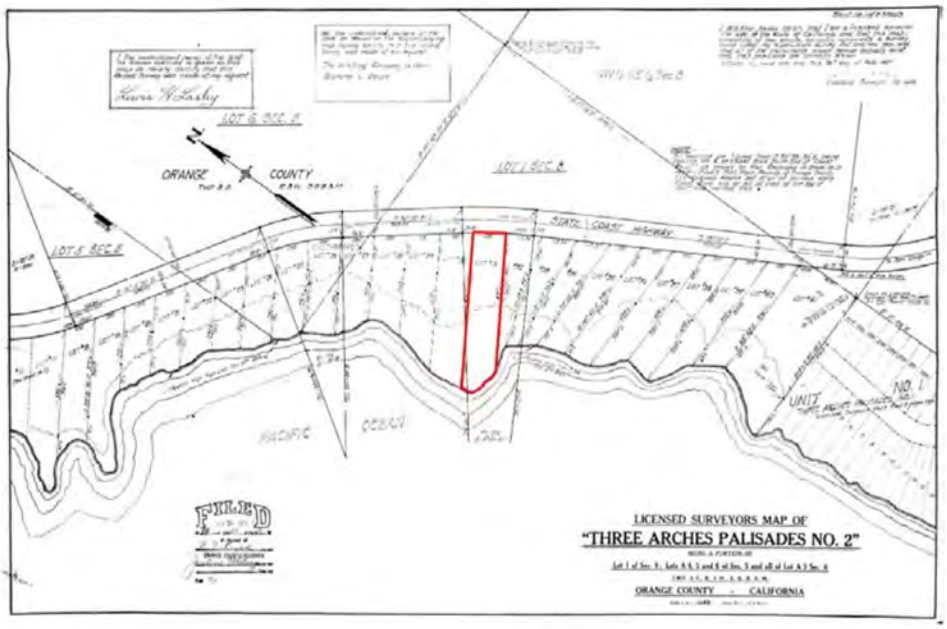
10/02/2017: Donald Sumner, Successor Trustee of The Sumner Trust dated 9/20/1977 to Chuck Truc Tron LE, as Trustee of The Chuck Truc Tron Le Trust.

10/24/2017: Chuck Truc Tron Le, Trustee to Chuck Truc Trong Le, Trustee and Christine Chung, as joint tenants

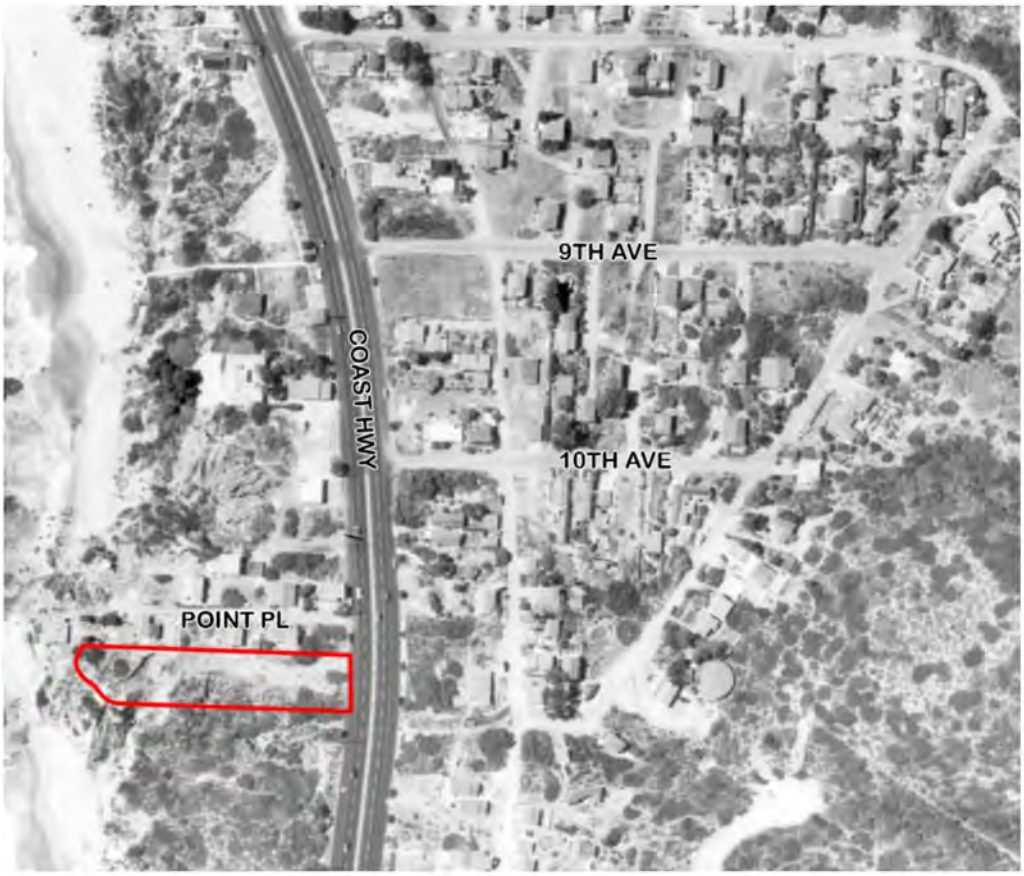
ASSESSMENT RECORDS

1934: 0 improvements
1942: 0 improvements
1943: 0 improvements
1946: 0 improvements
1947: 0 improvements
1948: Improvements at assessed value of $2240.

ADDITIONAL DOCUMENTATION: MAPS AND AERIALS



Tract map of Three Arches Palisades No. 2 subdivision with subject property outlined in red, 1927. (Orange County Public Works)



Aerial photograph with subject property outlined in red, 1947. Note the property is vacant. (Special Research Collections, UCSB Library, University of California Santa Barbara)

ADDITIONAL DOCUMENTATION: MAPS AND AERIALS

Aerial photograph with subject property outlined in red, 1952. (Special Research Collections, UCSB Library, University of California Santa Barbara)

Aerial photograph with subject property outlined in red, 1960. (Special Research Collections, UCSB Library, University of California Santa Barbara)

ADDITIONAL DOCUMENTATION: MAPS AND AERIALS

Aerial photograph with subject property outlined in red, 1968. Note addition at southwest corner of house. (Special Research Collections, UCSB Library, University of California Santa Barbara)

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

View of front yard and driveway with residence in the background, facing west.

South (primary) and east façade from driveway, facing northwest.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

View of the east façade, facing west.

View of the garage entrance on the south façade, facing northwest.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

View of the primary entrance on the south façade, facing west.

Detail of the primary entrance on the south façade, facing west.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

Detail of courtyard, facing northeast.

Detail of courtyard windscreen with canopy, facing southwest.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

Detail of courtyard windscreen with canopy, facing northeast.

View of the west façade showing triangular bay window and addition with balcony, facing east.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

Detail of addition with cantilevered balcony on the west facade, facing southeast.

Detail of triangular bay window on west facade, facing east.

ADDITIONAL DOCUMENTATION: EXISTING CONDITIONS PHOTOS

Detail of brick path and painted brick chimney on north facade, facing east.

View of the north façade with variety of original and replacement windows, facing southeast.

December 15, 2022
Rincon Project Number: 22-12850

Christian Dominguez, Senior Planner
Planning Division
City of Laguna Beach
505 Forest Avenue
Laguna Beach, California 92651
Via email: cdominguez@lagunabeachcity.net

Subject: Archaeological Resources Assessment for the Property Located at 32051 Coast Highway in the City of Laguna Beach, Orange County, California 92651

Dear Mr. Dominguez:

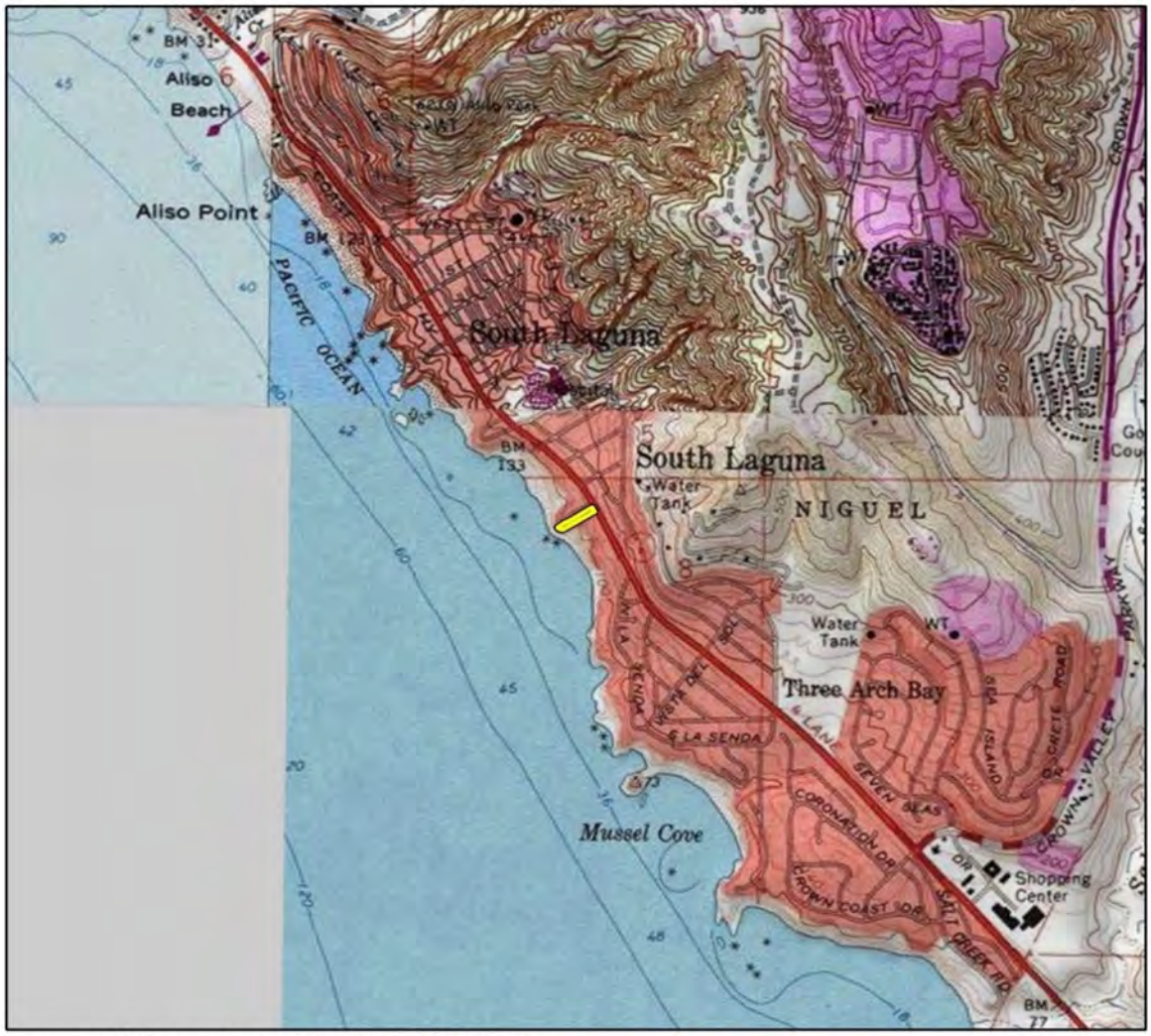
This letter report presents the findings of an archaeological resources assessment completed in support of the proposed development located at 32051 Coast in Laguna Beach. The City of Laguna Beach (City) retained Rincon Consultants, Inc. (Rincon) to support the proposed project's compliance with the California Environmental Quality Act (CEQA). This letter report documents the results of the tasks performed by Rincon, specifically a cultural resources records search of the California Historical Resources Information System (CHRIS) of the proposed project, a Sacred Lands File (SLF) search, and a pedestrian field survey of the project site. All work was completed in accordance with CEQA and applicable local regulations, including the City of Laguna Beach Municipal Code 25.45.002. The City of Laguna Beach is the lead agency under CEQA.

Project Site and Description

The project site is located at 32051 Coast Highway in Laguna Beach, Orange County, California. Specifically, the proposed project encompasses portions of Section 8 of Township 8 South, Range 8 West on the *Dana Point, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1). The approximately 0.5-acre site is located partially on a cliffside that slopes southwest towards a public beach and the Pacific Ocean.

The following project description has been adapted from information provided by the City in March 2022. The proposed project would demolish an existing 1,318-square-foot (sf) residence built in 1948 and construct a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The property is adjacent to the Pacific Ocean, to the west of Coast Highway. Construction would include the installation of a pool and jacuzzi with depth of three foot six inches, as well as a reflecting pool and water feature with a depth of one foot and six inches. The new residence is proposed for construction at the same location as the existing residence, though the proposed residence will be much larger and expand upon the footprint of the existing residence, requiring 1,260 sf of cut inside the building footprint and 1,150 sf of cut outside of the building footprint. A new concrete hardscape will be constructed to accommodate the larger residence. To accommodate the three levels proposed for the new residence, the existing slab will be demolished, and the new residence built lower into the cliffside, requiring a depth of 20 feet for ground disturbance. The parcel is zoned Residential Low Density (R-1), and the proposed use is permitted within the R-1 zoning designation. The project site is within the Coastal Zone and is classified by the City's Geographic Information System (GIS) layers as an Ecologically Sensitive Habitat Area (ESHA).

Figure 1 Project Vicinity



Basemap provided by National Geographic Society, Esri and their licensors © 2022. Dana Point Quadrangle. T08S R08W S08. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

Project Location

0 1,000 2,000 Feet

N

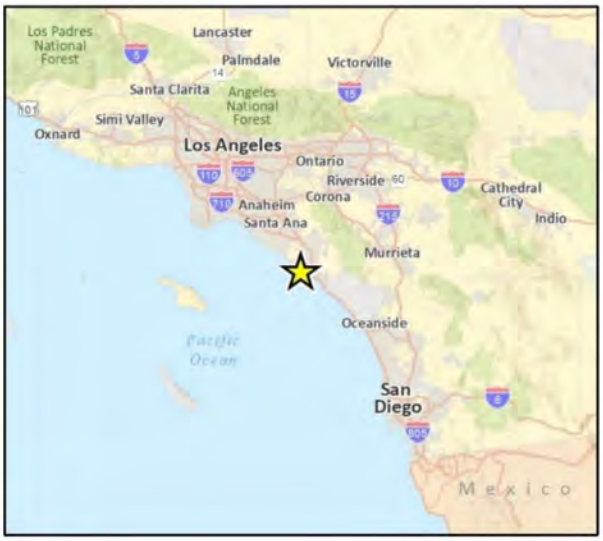


Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2022.

Methods

Background and Archival Research

Rincon completed background and archival research in support of this assessment. A variety of primary and secondary source materials were consulted. Sources included, but were not limited to, historical maps, aerial photographs, and written histories of the area. The following sources were utilized to develop an understanding of the project site and its context:

- Orange County Assessor's Office
- Historical aerial photographs accessed via NETR Online
- Historical aerial photographs obtained from Environmental Resources Data, Inc.
- Historical aerial photographs accessed via University of California, Santa Barbara Library FrameFinder
- Historical USGS topographic maps

Historic Resources Memo Peer Review and Evaluations

A historic assessment memorandum was prepared by Historic Resources Group in March of 2020, which included an evaluation of the existing on-site residence for the Laguna Beach Historic Register (Janssen and Aranguren 2020). In August 2022, Rincon Architectural Historians JulieAnn Murphy and Steven Treffers, MHP, reviewed the March 2020 report to identify potential deficiencies and provide recommendations to strengthen the cultural resources analysis defensibility for the Initial Study-Mitigated Negative Declaration (Murphy and Treffers 2022). In response to the Rincon peer review, on October 3, 2022, HRG completed an evaluation of the existing on-site residence for the California Register of Historic Resources (CRHR), finding the building not eligible for the Laguna Beach Historic Register and CRHR (Janssen 2022: 14).

Personnel

Rincon Senior Archaeologist Cameron Felt, MSc provided management oversight and reviewed the project for archaeological resources and is a contributing author of this report. Archaeologist Rachel Bilchak, BA, Registered Archaeologist, performed the field survey, completed the cultural resources records search, and SLF Search, and is a contributing author on this report. GIS Analyst Allysen Valencia prepared the figures found in this report. Cultural Resources Program Manager, Breana Campbell-King, MA, RPA, and Cultural Resources Principal, Shannon Carmack reviewed this report for quality control.

California Historical Resources Information System Records Search

On September 6, 2022, Rincon received CHRIS records search results from the SCCIC (Attachment A). The SCCIC is the official state repository for cultural resources records and reports for the county in which the proposed project falls. The purpose of the records search was to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the project site and a 0.5-mile radius surrounding it. In addition to the resource records and reports, Rincon conducted an examination of historical maps, the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), the Built Environment Resources Directory, the Archaeological Determinations of Eligibility list, and the listing of California Historical Landmarks.

Native American Heritage Commission Sacred Lands File Search

Rincon contacted the Native American Heritage Commission (NAHC) on August 8, 2022, to request a search of the SLF, as well as a contact list of Native Americans culturally affiliated with the project site vicinity (Attachment B). A positive response was received from NAHC on September 13, 2022. Under Assembly Bill (AB) 52 (California Government Code Section 21080.3.1 (a)), the City of Laguna Beach, as the CEQA lead agency, is required to consult with California Native American Tribes traditionally and culturally affiliated with the project site prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Field Survey

On September 16, 2022, Rincon conducted a Phase I pedestrian survey of the approximately 0.5-acre project site and photographed the existing building. Rincon archaeologist, Rachel Bilchak, conducted the survey of the subject property and its immediate surroundings using pedestrian transects spaced at maximum intervals of 10 meters, where access permitted. Transect accuracy was maintained through use of a hand-held global positioning system (GPS) unit. Site characteristics and survey conditions were documented using field records and a digital camera. Ms. Bilchak visually inspected all of the built environment features in the project site to assess overall condition and integrity, and to identify and document any potential character-defining features. All built environment features were documented with digital photographs and detailed notes. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historical debris (e.g., metal, glass, ceramics). Ground disturbances such as animal burrows and drainages were also visually inspected. Site characteristics and survey conditions were documented using field records and a digital camera. Copies of the survey notes and digital photographs are maintained at the Rincon San Diego office.

Findings

Cultural Context

The ethnographic and historical contexts of the project site are detailed below, with a particular emphasis placed on the vicinity of Laguna Beach.

Ethnographic Overview

The project site lies in the traditional territory of the Tongva/Gabrieleño. The name “Gabrieleño” denotes those people, who were administered by the Spanish from the San Gabriel Mission. It includes people from the Gabrieleño area proper, as well as other social groups nearby (Kroeber 1925, Plate 57, Bean and Smith 1978: 538). The term Gabrieleño was imposed upon the Tribe by Spanish Missionaries. Thus, descendants have chosen to use their original name, Tongva (Welch 2006). This term is used in the remainder of this section to refer to the pre-contact inhabitants of the Los Angeles Basin and their descendants. Archaeological evidence points to the Tongva arriving in the Los Angeles Basin sometime around 500 BCE, and the Tongva note their presence in the area going back thousands of years (Villa

2017). Today, the Tongva people are active in protecting their Tribal cultural resources in the greater Los Angeles Basin and three Channel Islands: present-day San Clemente, San Nicolas, and Santa Catalina.

The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin region (Mithun 2001). This language family includes dialects spoken by the nearby Juaneño and Luiseño to the southeast, the Serrano and Cahuilla to the northeast, and the Tataviam to the northwest. Yet, it is considerably different from the Chumash people living to the northwest and the Diegueño people (including the Ipai, Tipai, and Kumeyaay) to the south.

The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast. A total tribal population is estimated to have been at least 5,000 in 1770 (Bean and Smith 1978: 540), but recent ethnohistoric work suggests a number closer to 10,000 (O'Neil 2002). Political organization followed a patrilocal and patrilineal pattern. Typically, the oldest son would lead a family. Chieftainship was also passed down patrilineally. A Chari, or chief of a village or political grouping, was separate from religious leadership (King 2011).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and taught people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925: 637–638). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups as Christian missions were being built. Elements of Chinigchinich beliefs suggest it was a syncretic mixture of Christianity and native religious practices (McCawley 1996: 143–144).

Houses constructed by the Tongva were large, circular, domed structures made of willow poles, thatched with tule and sheltered up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probable communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996: 27).

The tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the Tribe exploited the mountains, foothills, valleys, deserts, including riparian and estuarine areas, as well as open and rocky coastal ecological niches. Like most Native Californians, acorns were the staple food. By the time of the early Intermediate Period, acorn processing was an established industry. Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Freshwater and saltwater fish, shellfish, birds, reptiles, insects, and large and small mammals were also consumed (Kroeber 1925: 631–632, Bean and Smith 1978: 546, McCawley 1996: 119–123, 128–131).

The Tongva used a wide variety of tools and implements to gather food resources. These included the bow and arrow, traps, digging sticks, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. The Tongva made oceangoing plank canoes (known as a ti'at) capable of holding six to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands. Tule reed canoes were employed for near-shore fishing (McCawley 1996: 117–127). Tongva people processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Kroeber 1925: 629, McCawley 1996: 129–138).

Deceased Tongva were either buried or cremated. Inhumation was more common on the Channel Islands and the neighboring mainland coast, and cremation was more predominate on the remainder of the coast and in the interior (Harrington 1942, McCawley 1996: 157). At the behest of the Spanish missionaries, cremation essentially ceased during the Post-Contact Period (McCawley 1996: 157).

Historical Context

The area that encompasses present-day Laguna Beach was settled by Americans moving west in search of land and prosperity in the late nineteenth century. The Timber Cultures Act of 1872 was a major impetus for many pioneers in the area, which granted 160 acres of land to anyone who planted 10+ acres of trees. In Laguna Beach, then known as "Lagoona," most settlers cultivated Australian eucalyptus trees, which came to characterize the nascent community with their drought tolerance and ample shade (Turnbull 1988).

Early settlement of Laguna Beach was for the most part limited to individual homesteaders. It was not until the arrival of brothers William and Nathanial Brooks that a true town was born. In 1876, William Brooks laid out a subdivision for a downtown, and served as the community's first stagecoach driver. Nathanial Brooks established irrigation utilizing pipes that brought water from Bluebird Canyon to Arch Beach. Two years later, George Rogers purchased the downtown area for $1,000 and subdivided it into individual lots for sale, marketing the area as a seaside retreat (Turnbull 1988). As a budding vacation spot, the town was peppered with early hotels and resorts, including the Arch Beach Hotel (1886), Hotel Laguna (1889), and Brooks House (1892). Laguna received a post office in 1891 and was officially named "Laguna Beach" in 1904.

With a growing reputation for its cool climate and picturesque village, artists began flocking to the community in the early twentieth century. Norman St. Clair was the first to arrive in 1903, and his plein air sketches enticed many other notable artists to join him. In 1918, the artist community attracted thousands of visitors with their first exhibition, and the Laguna Beach Art Association was established shortly thereafter (Turnbull 1988).

Completion of the Pacific Coast Highway in 1926 provided an easy route from Los Angeles to Laguna Beach, and increased traffic to the beachside community. Laguna Beach was incorporated as a city in 1927 with a population of 1,900 (Turnbull 1988). In 1932, the town held a Festival of the Arts in an attempt to lure visitors in the area for the Los Angeles Olympics to Laguna Beach. At the festival, Lolita Perine started the famous Pageant of the Masters by enacting famous paintings (Laguna Beach Historical Society 2019). The pageant is still held today.

With the involvement of the United States in World War II after the bombing of Pearl Harbor, the U.S. Army increased defenses in Southern California and Laguna Beach. In 1941, the Hotel Laguna was transformed into the quarters for El Toro's Marine Officers. After the culmination of the war many of the servicemen who had been stationed in the area or traversed it en route to the Pacific arena returned to settle in the seaside town. As a result, the population of Laguna Beach increased from 4,460 to 6,600 persons between 1940 and 1950 (Laguna Beach Historical Society 2019).

Laguna Beach continued to grow and serve as a seaside community for artists through the 1960s and 1970s. In 1962, the Laguna Beach College of Art and Design was founded. Later, in 1967, both the Sawdust Festival and Laguna Art-A-Fair were established (Laguna Beach Historical Society 2019).

Growing concerns over development also emerged in the 1960s and were prevalent through the 1990s. In 1968, the City of Laguna Beach purchased 1,000 feet of beach frontage. All buildings and structures on the purchased land were demolished and in 1974 the area was designated the Main Beach Park. Local bookseller Jim Dilley protected the Laguna Coast Wilderness Park starting in 1978, and Laguna citizens voted to acquire land surrounding the community for conservation purposes in 1991, known as the "Green Belt" (Laguna Beach Historical Society 2019). The community continues in its commitment to the arts and land conservation today.

Known Cultural Resources Studies

The CHRIS records search and background research identified three cultural resources studies within or adjacent to the project site, and 20 studies within 0.50 mile of the project site (Attachment A). Of these studies, none included pedestrian survey of the project site. Known studies that occurred within or adjacent to the project site are discussed in further detail below.

Study OR-04179

Study OR-04179 is the City's Historic Resources Inventory ordinance and provides a list of properties included on the City of Laguna Beach Historic Resources Inventory as the best examples of historically significant architecture within the city. The boundary of the study covers the whole city, including the project site. No cultural resources were identified within the project site boundary.

Study OR-00125

Scientific Resource Surveys, Inc., conducted a field survey of two parcels adjacent to the project site in November 1976, prior to development within the subject parcels. No cultural resources were identified.

Study OR-04476

BCR Consulting, LLC conducted a cultural resources survey in 2014 in support of the Cultural Resources Assessment of the Tunnel Stabilization/Sewer Pipeline Replacement Project. The historic-aged sewer and tunnel within the sea cliffs were rapidly deteriorating and required maintenance and reinforcement. While this study is mapped within the extent of the project site, there is no indication that its scope of work actually included the project site, as the sewer pipeline route and tunnel is embedded within the sea cliffs beneath the property.

Known Cultural Resources

The CHRIS records search and background research identified four cultural resources within 0.50 mile of the project site. Resources recorded in the search radius are listed in Table 1 below. No cultural resources have been previously recorded within or adjacent to the project site.

Table 1 Known Cultural Resources

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to Project Site
P-30-000597	-*	Site	Prehistoric – shell midden containing non-indigenous lithics, a hammerstone, and possible milling stone	*C.E. Drover (1976), BCR Consulting 2014*	Unknown	Outside
P-30-001060	CA-ORA-1060	Site	Prehistoric – shell midden	*W. Lewis and J. Tadlock (1976)*	Unknown	Outside
P-30-160186	-*	District	South Laguna Historic District	*K. Turnbull, Environmental Coalition (1981)*	Eligible Local Historic District (5D2)	Outside
P-30-177513	-*	Structure	Southcoast Water District Beach Interceptor Sewer and Tunnel	*D. Brunzell, BCR Consulting (2014)*	Unknown	Outside

Source: SCCIC 2022; -* = Trinomial unknown or unissued

Aerial Imagery and Historical Topographic Maps Review

Rincon completed a review of historical topographic maps and aerial imagery to ascertain the development history of the project site. Historical topographic maps from 1938 to 1946 depict the project site as undeveloped land (USGS 2022). From 1938 to 1946, historical topographic maps depict residential development outside of and to the west of the project site (USGS 2022). Aerial imagery from 1952 bears the first depiction of a residence within the project site (NETR Online 2022). From 1985 to 2020 the layout of the project site and surrounding area has remained relatively unchanged (NETR Online 2022).

Sacred Land File Search

On September 13, 2022, the NAHC responded to Rincon's AB 52 contacts and SLF request, stating that the results of the SLF search were positive. See Attachment B for the NAHC response, including Tribal contacts list(s). As the lead agency, the City is responsible for conducting AB 52 outreach. The City sent letters on October 20, 2022 to 11 Native American contacts that had previously requested to be notified of project subject to AB 52 to request information on potential cultural resources in the project site vicinity that may be impacted by the proposed projects development. The City also informed the California Cultural Resource Preservation Alliance, Inc. (CCRPA) of the project and solicited their input. The City has received one response to date: a letter from the CCRPA. The letter received from CCRPA, dated November 2, 2022, recommends archaeological and Native American monitoring as a project design feature due to the general cultural sensitivity of the Laguna Beach area. No responses from the tribal contacts were received. Attachment C provides the results of the City of Laguna Beach's outreach effort.

Survey Results

The following section summarizes the results of all background research and fieldwork as they pertain to archaeological resources that may qualify as historical resources and/or unique archaeological resources.

Ground visibility was low, with approximately 15 percent visibility. The property was 85 percent developed with modern disturbances including landscaping, the building, and irrigation. Built environment (the property and driveway), ice plants, coastal scrub brush, non-native grasses and shrubs, and artificial landscaping obscured surface visibility throughout the project site (Photo 5–12). The soil was a compacted light to medium brown, fine-grained, loamy sand and sandstone with gravel and small rock inclusions (Photo 17–1). The property sloped downward toward the southwest at a 30-to-40-degree angle until the back of the property to the southwest; at the edge of the built property the slope increased to an 80 to 90 degree slope making it impossible to survey. (Photo 19–2). The surface of the project site has been heavily disturbed from modern activity, with trash and broken glass scattered throughout the southwestern survey location (Photo 3). Also noted were brick remnants and modern bovine bone (Photo 4). Results of the field survey identified no evidence of archaeological remains or Native American cultural resources within the project site.

Photo 5. Front of the property with driveway and landscaping, facing east.

Photo 6. Front of the property with driveway and landscaping, facing southwest.

Photo 7. Front of the property with driveway and landscaping, facing west.

Photo 8. Back northwest corner of the property with landscaping, facing southeast

Photo 9. Crawlspace under western portion of the house, facing east.

Photo 10. Northern side of the house, facing west.

Photo 11. Northern side of the house, facing east.

Photo 12. Southern side of the house, facing north.

Photo 13. Southern side of the house, facing southwest.

Photo 14. Southern side of the house, facing east.

Photo 15. Front of the house from southeast, facing northwest.

Photo 16. Glass bottles on cliff side, no safe access, facing southeast.

Photo 17. No access to southwestern property due to cliffside, facing southeast.

Photo 18. Cliffside with "No Trespassing" sign from the base of the cliff below the property, facing northeast.

Photo 19. Cliff side with the property above, facing northeast.

Photo 20. Modern refuse located on southwestern portion of the property, cow bone and brick plan view.

Conclusions and Recommendations

Summary of Findings

No archaeological resources were identified within the proposed project footprint. The project site is completely developed with a single-family residence, driveway, landscaping, terracing, and irrigation. Part of the proposed project site was inaccessible due to the steep slope of the southwestern cliffside; however, this area is outside of the proposed project disturbance footprint.

The CHRIS records search and background research identified two known prehistoric resources, one historical resource, and one historic district near the project area. These cultural resources include prehistoric shell midden and non-indigenous lithics (P-30-000597), prehistoric shell midden (P-30-001060), the historic-aged Beach Interceptor Sewer and Tunnel (P-30-177513), and the South Laguna Historic District (P-30-160186). While no previously recorded cultural resources were identified in the SCCIC search and no archaeological resources were identified during pedestrian survey, the SLF Request was positive, indicating that tribal cultural resources may be present within the project site. Further information about tribal cultural resources is pending AB 52 consultation.

While the project site exhibits environmental sensitivity, the negative results of the pedestrian survey, paired with the negative results of pedestrian survey in the neighboring parcel prior to development, indicates a lower likelihood for archaeological resources to be present within the project site. However, the lack of surface evidence of archaeological materials does not preclude their subsurface existence. Rincon presents the following recommendation in case of unanticipated discovery of cultural resources

during project development. With adherence to these recommendations, Rincon recommends a finding of ***less-than-significant impacts to archaeological resources*** under CEQA for the current project. The project is required to adhere to regulations regarding the unanticipated discovery of human remains.

Unanticipated Discovery of Cultural Resources

If cultural resources are encountered during ground-disturbing activities, work in the immediate area (100 feet of the discovery) must halt and an archaeologist meeting the Secretary of the Interior's *Professional Qualification Standards* for archaeology (National Park Service 1983) should be contacted immediately to evaluate the find. Should the discovery be Native American in origin, Native American consultation will be conducted and a Tribal monitor culturally affiliated with the area will be contracted to assist with the discovery. If the discovery proves to be significant under the NHPA and/or CEQA and cannot be avoided, additional work such as data recovery excavation and additional Native American consultation ahead of any data recovery efforts may be warranted to mitigate any significant impacts/adverse effects.

Human Remains

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner would notify the Native American Heritage Commission, which would determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance.

Should you have any questions concerning this study, please do not hesitate to contact the undersigned at 760-517-9141 or cfelt@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Cameron Felt, MSc
Senior Archaeologist

Rachel Bilchak, RPA
Archaeologist

Breana Campbell-King, MA, RPA
Program Manager

Shannon Carmack
Principal

Attachments

Attachment A	California Historical Resources Information System Results
Attachment B	Native American Heritage Commission SLF Results
Attachment C	Native American Outreach Efforts

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Attachment A

California Historical Resources Information System Results

Report List

23855

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00094		1976	Desautels, Roger J.	Archaeological Survey Report on Parcel Number 46 - a Residential Lot Located in the South Laguna Area of O. C.	Scientific Resource Surveys, Inc.	
OR-00125		1976	Desautels, Roger J.	Lot 34 of a Resurvey of a Portion of 3 Arches Palisades #2 (rs. 3-32) in the South Laguna Area of the County of Orange	Scientific Resource Surveys, Inc.	
OR-00255		1977	Anonymous	Archaeological Report on the Aliso Creek Corridor- Planning Units 2 & 3 Orange County, California	Scientific Resource Surveys, Inc.	30-000006, 30-000008, 30-000009, 30-000010, 30-000017, 30-000018, 30-000019, 30-000020, 30-000033, 30-000040, 30-000074, 30-000110, 30-000126, 30-000131, 30-000133, 30-000135, 30-000388, 30-000389, 30-000390, 30-000395, 30-000396, 30-000397, 30-000398, 30-000399, 30-000400, 30-000401, 30-000402, 30-000403, 30-000404, 30-000405, 30-000406, 30-000407, 30-000512, 30-000515, 30-000580
OR-00580		1977	Anonymous	The Aliso Creek Watershed, Orange County, California a Proposal for Creating an Archaeological District for the National Register of Historic Places and a Suggested Research and Study Design	Scientific Resource Surveys, Inc.	
OR-00628		1981	Desautels, Nancy A.	Archaeological/historical Report on Tt 11323 Located in the Three Arch Bay Community of South Laguna	Scientific Resource Surveys, Inc.	
OR-00663	Paleo -	1983	Anonymous	Cultural Resources Report on the Proposed South Coast Community Hospital Extension, South Laguna, Orange County, California	Scientific Resource Surveys, Inc.	
OR-00664		1983	Anonymous	Cultural Resource Report on Two Parcels of Land Located in the South Laguna Area	Scientific Resource Surveys, Inc.	30-000437
OR-00735		1984	Bissell, Ronald M.	Report of Archaeological Survey Tentative Tracts 8735 and 9702 South Laguna, Orange County, California	RMW Paleo Associates, Inc.	30-000437
OR-00751		1976	Tadlock, Jean and Tadlock, Lewis	Archaeological Element of an Environmental Impact Report for Tentative Tract Map No. 9440 North La Senda Drive, South Laguna, Orange County, California		
OR-01121		1991	Breece, William H.	Results of the Archaeological Study for the Binion Property, Laguna Niguel, Orange County, California.	LSA Associates, Inc.	30-000824

Report List

23855

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01221		1992	Bissell, Ronald M.	Reconnaissance of a 22 Acre Parcel in Laguna Niguel, Orange County, California	RMW Paleo Associates, Inc.	
OR-01797	Cellular -	1998	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: Cm 074-03 in the City of Laguna Beach, California	Chambers Group, Inc.	
OR-02528	Cellular -	2002	Duke, Curt	Cultural Resource Assessment At&t Wirleless Services Facility No. 13330b, Orange County, California	LSA Associates, Inc.	
OR-03133		2004	McKenna, Jeanette A.	Cultural Resource Assessment Coast Highway Streetscape Improvements in South Laguna	McKenna et al.	19-000597, 19-000842, 30-000597
OR-03507		2006	McKenna, Jeanette A.	Historic Survey Report for the City of Laguna Beach Street Scape Improvements	McKenna et al.	30-000842
OR-04026		2007	McKenna, Jeanette A.	Archaeological Survey Report: South Laguna Coast Highway Improvements Project, Coast Highway Between West Street to 5th Avenue, City of South Laguna, Orange County, California	McKenna et al.	30-000842
OR-04179		2008	unknown	Laguna Beach Historic Resources Inventory	City of Laguna Beach	30-157939
OR-04416		2010	Daly, Pamela	Historic Resources Assessment Report of 31762 South Coast Highway, South Laguna Beach, CA	Daly and Associates	30-177512
OR-04459		2014	Bonner, Diane, Wills,Carrie, and Crawford, Kathleen	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA02074A (CM074 S Coast Medical Center) 31872 Coast Highway, Laguna Beach, Orange County, California	EAS	30-000437, 30-000597, 30-000812, 30-000813, 30-000842, 30-160147, 30-160186
OR-04476		2014	Brunzell, Dave	Cultural Resources Assessment Tunnel Stabilization and Sewer Pipeline Replacement Project South Laguna Beach, Orange County, California	BCR Consulting	30-000008, 30-000009, 30-000010, 30-000011, 30-000074, 30-000127, 30-000437, 30-000583, 30-000597, 30-000812, 30-000813, 30-000814, 30-000842, 30-001060, 30-001713, 30-160186, 30-176779, 30-177512, 30-177513

CHRIS Records Search Checklist

Info. Center: SCCIC **Appt. Date & Time** 23855
Project & Task #: 22-12850 **Project Name:** 32051 Coast Highway
County: _____ **# of Hours allotted for search** _____
Mileage allotted (if any): _____ **Drive time allotted (if any):** _____

- ☐ Make at least 2 copies of records search maps (one for sites, one for surveys)
- ☐ Map and label all previously recorded resources within project site and search radius
- ☐ List of all previously recorded resources on Data Sheet (using Primary Numbers or Trinomials)
- ☐ Map and label all previous studies within project site and search radius
- ☐ List all studies (using #s) on Data Sheet
- ☐ Use different colored pencils or pens to differentiate previous study areas
- ☐ Copy all site records (within project site and search radius)
- ☐ Copy all reports within project site only
- ☐ Obtain a reference list of reports within project site and search radius
- ☐ Check the following lists: National Register, California Register, Historical Resources Inventory, California Historical Landmarks, California Points of Historical Interest, Archaeological Determinations of Eligibility
- ☐ Photocopy all historic maps that include project site
- ☐ Record the full reference information for each historic map on the Data Sheet
- ☐ Keep track of the number of photocopies you make.
- ☐ Double check your maps, lists, copies to make sure you didn't forget anything.
- ☐ Get a letter from IC if possible, documenting your search
- ☐ Make sure to put everything back in it's proper place and clean up.
- ☐ Be nice and courteous, as we rely on IC staff.
- ☐ Bring back a checked, dated, and initialed copy of this checklist and keep with the records search results.

Completed by: A. BEAN Date: 9/1/2022
# of Hours Billed for search (should match IC's records): _____
# of Hours Billed for Drive Time: _____ Mileage: _____
Supervisor's Initials: _____ Project Manager's Initials: _____

START 2PM

END 4PM

02

California Historical Resources Information System

CHRIS Data Request Form

ACCESS AND USE AGREEMENT NO.: _____ **IC FILE NO.:** 23455

To: South Central Coastal Information Center

Print Name: Rachel Bilchak Date: 08/04/2022

Affiliation: Rincon Consultants, Inc.

Address: 180 N. Ashwood Avenue

City: Ventura State: CA Zip: 93003

Phone: (805) 644-4455 Fax: (805) 644-4455 Email: rbilchak@rinconconsultants.com

Billing Address (if different than above): _____

Billing Email: ap@rinconconsultants.com Billing Phone: (805) 644-4455

Project Name / Reference: 32051 Coast Highway (22-12850)

Project Street Address: 32051 Coast Highway

County or Counties: Orange County

Township/Range/UTMs: T08S/R08W/ Sections 05, 06, 08

USGS 7.5' Quad(s): Dana Point Quadrangle, San Juan Capistrano Quadrangle

PRIORITY RESPONSE (Additional Fee): yes ☐ / no ☒

TOTAL FEE NOT TO EXCEED: $800.00
(If blank, the Information Center will contact you if the fee is expected to exceed $1,000.00)

Special Instructions:

Records search request for 32051 Coast Highway, Laguna Beach, with .5 mile buffer.

Information Center Use Only

Date of CHRIS Data Provided for this Request: _____

Confidential Data Included in Response: yes ☐ / no ☐

Notes: _____

CHRIS Data Request Form

Mark the request form as needed. Attach a PDF of your project area (with the radius if applicable) mapped on a 7.5' USGS topographic quadrangle to scale 1:24000 ratio 1:1 neither enlarged nor reduced and include a shapefile of your project area, if available. Shapefiles are the current CHRIS standard for submitting digital spatial data for your project area or radius. **Check with the appropriate IC for current availability of digital data products.**

- Documents will be provided in PDF format. Paper copies will only be provided if PDFs are not available at the time of the request or under specially arranged circumstances.
- Location information will be provided as a digital map product (Custom Maps or GIS data) unless the area has not yet been digitized. In such circumstances, the IC may provide hand drawn maps.
- In addition to the $150/hr. staff time fee, client will be charged the Custom Map fee when GIS is required to complete the request [e.g., a map printout or map image/PDF is requested and no GIS Data is requested, or an electronic product is requested (derived from GIS data) but no mapping is requested].

For product fees, see the CHRIS IC Fee Structure on the OHP website.

1. **Map Format Choice:**

Select One: Custom GIS Maps ☐ GIS Data ☒ Custom GIS Maps **and** GIS Data ☐ No Maps ☐

Any selection below left unmarked will be considered a "no. "

Location Information:

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Locations[1]	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Locations	yes ☒ / no ☐	yes ☒ / no ☐
Report Locations[1]	yes ☒ / no ☐	yes ☒ / no ☐
"Other" Report Locations[2]	yes ☐ / no ☒	yes ☐ / no ☒

3. **Database Information:**
(contact the IC for product examples, or visit the SSJVIC website for examples)

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Database[1]		
List (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☐ / no ☒	yes ☐ / no ☒
NON-ARCHAEOLOGICAL Resource Database		
List (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☐ / no ☒	yes ☐ / no ☒
Report Database[1]		
List (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☐ / no ☒	yes ☐ / no ☒
Include "Other" Reports [2]	yes ☐ / no ☒	yes ☐ / no ☒

4. **Document PDFs** (paper copy only upon request):

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Records[1]	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Records	yes ☒ / no ☐	yes ☒ / no ☐
Reports[1]	yes ☒ / no ☐	yes ☐ / no ☒
"Other" Reports[2]	yes ☐ / no ☒	yes ☐ / no ☒

CHRIS Data Request Form

5. Eligibility Listings and Documentation:

	Within project area	Within .5 mi. radius
OHP Built Environment Resources Directory[3]:		
Directory listing only (Excel format)	yes ☒ / no ☐	yes ☒ / no ☐
Associated documentation[4]	yes ☒ / no ☐	yes ☒ / no ☐
OHP Archaeological Resources Directory[1,5]:		
Directory listing only (Excel format)	yes ☒ / no ☐	yes ☒ / no ☐
Associated documentation[4]	yes ☒ / no ☐	yes ☒ / no ☐
***California Inventory of Historic Resources* (1976):**		
Directory listing only (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Associated documentation[4]	yes ☒ / no ☐	yes ☒ / no ☐

6. Additional Information:

The following sources of information may be available through the Information Center. However, several of these sources are now available on the OHP website and can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through these sources. Indicate below if the Information Center should review and provide documentation (if available) of any of the following sources as part of this request.

Caltrans Bridge Survey	yes ☐ / no ☒
Ethnographic Information	yes ☐ / no ☒
Historical Literature	yes ☐ / no ☒
Historical Maps	yes ☐ / no ☒
Local Inventories	yes ☒ / no ☐
GLO and/or Rancho Plat Maps	yes ☐ / no ☒
Shipwreck Inventory	yes ☐ / no ☒
Soil Survey Maps	yes ☐ / no ☒

---

[1] In order to receive archaeological information, requestor must meet qualifications as specified in Section III of the current version of the California Historical Resources Information System Information Center Rules of Operation Manual and be identified as an Authorized User or Conditional User under an active CHRIS Access and Use Agreement.

[2] "Other" Reports GIS layer consists of report study areas for which the report content is almost entirely non-fieldwork related (e.g., local/regional history, or overview) and/or for which the presentation of the study area boundary may or may not add value to a record search.

[3] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Includes, but not limited to, information regarding National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and historic building surveys. Previously known as the HRI and then as the HPD, it is now known as the Built Environment Resources Directory (BERD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

[4] Associated documentation will vary by resource. Contact the IC for further details.

[5] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Previously known as the Archaeological Determinations of Eligibility, now it is known as the Archaeological Resources Directory (ARD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

RESOURCES

P-597
P-160186
P-177513
P-1060
P-160186

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Half-Mile Buffer

Area of Potential Effects

N

0 1,000 2,000 Feet

0 250 500 Meters

1:24,000

Records Search Map

REPORTS 1

OR 255

OR 4416/
OR 4026?

OR-3133

OR-94

OR-125

OR-751

OR-4476

OR-664
OR-735
OR-663
OR-1121

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Half-Mile Buffer

Area of Potential Effects

N

0 1,000 2,000 Feet

0 250 500 Meters

1:24,000

Records Search Map

REPORTS 2

OR-3507
OR-580
OR-1797/
OR 4459
~~OR-4476~~

OR-1221
~~OR 1221~~
OR-628
OR-2528
OR-4179

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Half-Mile Buffer

Area of Potential Effects

N

0 1,000 2,000 Feet

0 250 500 Meters

1:24,000

Records Search Map

Attachment B

Native American Heritage Commission SLF Results

NATIVE AMERICAN HERITAGE COMMISSION

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

September 13, 2022

Rachel Bilchak
Rincon Consultants, Inc.

Via Email to: rbilchak@rinconconsultants.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 32051 Coast Highway (City of Laguna Beach) Project, Orange County

Dear Ms. Bilchak:

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

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

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

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

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

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

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

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

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

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

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact the Juaneno Band of Mission Indians Acjachemen Nation - Belardes on the attached list for more information.

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

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

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

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

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

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Attachment C

Native American Outreach Efforts

October 14, 2022

Gabrieleño Band of Mission Indians – Kizh Nation
Andrew Salas, Chairperson
P.O. Box393
Covina, CA, 91723
Phone: (626)926-4131
admin@gabrielenoindians.org

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Salas:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Gabrieleño Band of Mission Indians – Kizh Nation is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)
Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Gabrieleño/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA,91778
Phone: (626)483-3564
admin@gabrielenoindians.org

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Morales:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Gabrieleño/Tongva San Gabriel Band of Mission Indians is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Gabrielino/Tongva Nation
Sandonne Goad, Chairperson
106 ½ Judge John Aiso St., #231
Los Angeles, CA,90012
Phone:(951)807-0479
sgoad@gabrielino-tongva.com

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Vice Chairperson Goad:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Gabrielino/Tongva Nation is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Gabrielino Tongva Indians of California Tribal Council
Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078
Simi Valley, CA,93094
Phone: (626)407-8761
christina.marsden@alumni.usc.edu

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Ms. Conley:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Gabrielino Tongva Indians of California Tribal Council Nation is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA,90707
Phone: (562)761-6417
gtongva@gmail.com

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Dorame:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

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The input of the Gabrielino Tongva Indians of California Tribal Council is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

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

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Mr. Alvarez:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Gabrielino-Tongva Tribe is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Juaneño Band of Mission Indians
Sonia Johnston, Chairperson
P.O. Box 25628
Santa Ana, CA,92799
sonia.johnston@sbcglobal.net

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Johnston:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Juaneño Band of Mission Indians is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Juaneño Band of Mission Indians Acjachemen Nation -Belardes
Matias Belardes, Chairperson
32161 Avenida Los Amigos
San Juan Capistrano, CA,92675
Phone: (949)293-8522
kaamalam@gmail.com

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Belardes:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Juaneño Band of Mission Indians Acjachemen Nation -Belardes is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Juaneño Band of Mission Indians Acjachemen Nation 84A
Heidi Lucero, Chairperson
31411-A La Matanza Street
San Juan Capistrano, CA,92675
Phone: (562)879-2884
hllucero105@gmail.com

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Lucero:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Juaneño Band of Mission Indians Acjachemen Nation 84A is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Soboba Band of Luiseño Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487
San Jacinto, CA, 92581
Phone: (951)663-5279
jontiveros@soboba-nsn.gov

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Mr. Ontiveros:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Soboba Band of Luiseno Indians is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)

Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

Soboba Band of Luiseño Indians
Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA,92581
Phone: (951)654-5544
ivivanco@soboba-nsn.gov

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear Chairperson Vivanco:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the Soboba Band of Luiseño Indians is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)
Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

October 14, 2022

CCRPA
PO Box 54132
Irvine, CA 92619-4132

RE: AB 52 Consultation, 32051 Coast Highway Project Location, Laguna Beach, California

Dear CCRPA:

The City of Laguna Beach is preparing an INITIAL STUDY for the proposed 32051 Coast Highway Project. The proposed project would involve demolishing an existing 1,318 square-foot (sf) residence built in 1948 and constructing a 6,774-sf single-family residence with a 590-sf garage and 1,213-sf elevated deck terrace. The proposed project is subject to the California Environmental Quality Act.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

The input of the CCRPA is important to the City of Laguna Beach's planning process. Under AB 52, you have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (949) 497-0745 or via e-mail at cdominguez@lagunabeachcity.net. Thank you for your assistance.

Sincerely,

Christian Dominguez
Christian Dominguez (Oct 19, 2022 11:24 PDT)
Christian Dominguez
Senior Planner
City of Laguna Beach

Enclosure: Project Location Map

Appendix D

Energy Use Calculations

32051 Coast Highway Project

Last Updated: 10/20/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saws	1	8	81	0.73	Demolition Phase	1,807
Rubber Tired Dozers	1	1	247	0.4	Demolition Phase	339
Tractors/Loaders/Backhoes	2	6	97	0.37	Demolition Phase	1,645
Graders	1	8	187	0.41	Site Preparation Phase	778
Pumps	1	8	84	0.74	Site Preparation Phase	701
Tractors/Loaders/Backhoes	1	8	97	0.37	Site Preparation Phase	405
Bore/Drill Rigs	1	8	221	0.5	Grading Phase	2,056
Graders	2	6	187	0.41	Grading Phase	2,140
Off-Highway Trucks	3	8	402	0.38	Grading Phase	8,527
Rubber Tired Dozers	1	6	247	0.4	Grading Phase	1,379
Tractors/Loaders/Backhoes	3	7	97	0.37	Grading Phase	1,949
Cement and Mortar Mixers	1	8	9	0.56	Building Construction Phase	983
Generator Sets	1	8	84	0.74	Building Construction Phase	12,127
Welders	3	8	46	0.45	Building Construction Phase	12,116
Air Compressors	1	6	78	0.48	Architectural Coating Phase	277
Pavers	1	7	130	0.42	Paving Phase	485
Paving Equipment	1	8	132	0.36	Paving Phase	482
					Total Fuel Used	**48,196 (Gallons)**

Construction Phase	Days of Operation
Demolition Phase	65
Site Preparation Phase	24
Grading Phase	44
Building Construction Phase	415
Paving Phase	24
Architectural Coating Phase	21
Total Days	593

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition Phase	25.3	10	14.7	377.67
Site Preparation Phase	25.3	3	14.7	41.83
Grading Phase	25.3	25	14.7	639.13
Building Construction Phase	25.3	4	14.7	964.51
Paving Phase	25.3	5	14.7	69.72
Architectural Coating Phase	25.3	1	14.7	12.20
			Total	**2,105.06**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)

		HAULING TRIPS		
Demolition Phase	7.6	6	20.0	15.79
Site Preparation Phase	7.6	0	20.0	0.00
Grading Phase	7.6	300	20.0	789.47
Building Construction Phase	7.6	0	20.0	0.00
Paving Phase	7.6	0	20.0	0.00
Architectural Coating Phase	7.6	0	20.0	0.00
		Total		**805.26**
		VENDOR TRIPS		
Demolition Phase	7.6	0	6.9	0.00
Site Preparation Phase	7.6	0	6.9	0.00
Grading Phase	7.6	0	6.9	0.00
Building Construction Phase	7.6	2	6.9	753.55
Paving Phase	7.6	0	6.9	0.00
Architectural Coating Phase	7.6	0	6.9	0.00
		Total		**753.55**

Total Gasoline Consumption (gallons)	**2,105**
Total Diesel Consumption (gallons)	**49,755**

Sources:

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[2] United States Department of Transportation, Bureau of Transportation Statistics. 2022. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix E

Geotechnical Reports

Borella Geology, Inc.
Consulting Engineering Geology

October 26, 2019

Mr. Chuck Le
32051 South Coast Hwy
Laguna Beach, CA 92651

Subject: **Preliminary Geotechnical Report for New Residence**
32051 South Coast Hwy
Laguna Beach, CA 92651

Dear Mr. Le,

We have completed the preliminary geotechnical investigation for your property, located at 32051 South Coast Highway in Laguna Beach, CA. Our investigations were conducted during July of 2019 and consisted of:

1. Geologic literature review
2. Aerial photography review
3. Site reconnaissance
4. Geologic mapping and observations of this property and surrounding areas
5. Subsurface exploration, logging and bluff mapping
6. Topographic and geologic profile construction
7. Bluff edge determination
8. Soil analysis
9. Stability Analysis
10. Preparation of this report with illustrations

The purposes of this report are to (1) evaluate the engineering geologic and soils conditions beneath the proposed location of the new residence and surrounding property and (2) provide foundation information and recommendations for the proposed new living residence.

1617 Hillcrest Drive, Laguna Beach, CA 92651 (949) 494-3566 Fax:(949) 497-0468 borellageology@yahoo.com

Some additional geological observations will have to be made during grading and construction phases, if/when any over-excavation and re-compaction has been performed and foundation elements (conventional and/or deepened) are excavated for support of the new living residence and adjoining hardscape. Please keep us informed as to your construction schedule so we may perform these tasks. Compaction testing and evaluation by the soil engineer of record (David Purkis) will also be required. **This additional work is to be performed on a time and materials basis.**

If we can be of any further assistance to you, please contact us.

Respectfully submitted,
Borella Geology, Inc.

Peter E. Borella, PhD
CEG #1394

David A. Purkis
RCE #42810

TABLE OF CONTENTS

References

1. Aerial Photographs

Date	*Flight*	*Frame*	*Scale*	*Source*
10-15-39	5925	#182, 183	1"= 2000'	Teledyne
7-30-70	41	#18, 19	1"= 1200'	Lung
8-3-89	1834	#185, 186	1"= 2000'	NAPP (IR)
06-01-94	6866	#143, 144	1"= 2000'	NAPP

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5. California Building Code, 2016.

6. City of Laguna Beach file on 32051, 32061. 31861 Coast Highway.

7. Edgington, W. J., 1974, Geology of the Dana Point Quadrangle, Orange County, California, California Division of Mines and Geology, Special Report 109.

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19. SCSN (Southern California Seismic Network) – Report by the California Integrated Seismic Network (Caltech/USGS), Egill Hauksson, Kate Hutton, and Doug Given - http://www.scsn.org/.

20. Structural Engineers Association of Southern California, Seismology Committee on Various Topics, February 21, 2004; Ground Motion/Site Conditions, White Paper on Seismic Increment of Active Earth Pressure.

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Site Description and Geologic Setting

The subject property is a bluff top lot located adjacent to and seaward of South Coast Hwy in southern Laguna Beach, CA. The lot is nearly rectangular in shape with 50′ of frontage on South Coast Hwy and approximately 430′ extending southwesterly (Fig. 1). The south/southwest boundary of the property is defined by the top of the large coastal bluff. The beach and Pacific Ocean lie directly southwest of the coastal bluff. According to the parcel map on file at the City of Laguna Beach, the coastal bluff appears to be the property of the County of Orange. The southerly property boundary was not depicted on the topological survey provided to this office. The subject lot is bordered to the northwest and southeast by neighboring single-family living residences. Currently an existing residence is located on the subject lot and is accessed by a driveway extending downward from South Coast Hwy. It appears as if the upper portion of the lot has been slightly graded.

Topographically, the subject site consists of three distinct sections: (1) an inclined upper bluff top that extends from South Coast Hwy seaward for roughly 390′ at an average slope angle of 11°; (2) a lower bluff top that extends seaward of (1) for approximately 50′ at an average slope of 33° (1.5:1 H:V) and; (3) a vertical to near vertical coastal bluff that is approximately 45-50′ in height (Figs. 1,2). A beach is present at the base of the coastal bluff. The subject property is located at an elevation ranging from approximately 60′ to 165′ above mean sea level. Maximum elevation change between property lines is therefore ~105′. The coastal bluff in this area of South Laguna is irregular and incised by numerous gullies/small canyons. One such gulley is located south of the subject lot. The properties northern boundary is positioned at the top of this inland gully slope. Thus portions of the property slope to both the south (towards gully) and southwest (towards coastal bluff). See figs.1-3. The majority of the original gully was filled in during the construction of the neighboring (southern) property.

Based upon a review of published maps for the area (Fig. 3a, Edgington, 1974), the subject site is underlain by non-marine and marine terrace sediment overlying bedrock assigned to the San Onofre Breccia formation. The terrace sediment and bedrock units can be clearly observed within the coastal bluff and other exposures on the subject lot. Observations made during exploratory excavations and during geologic mapping of the site confirm the presence of terrace sediment and bedrock (San Onofre Breccia). The bluff top portion of the property is an elevated marine terrace formed approximately 120 ka. The terrace surface exposes bedrock (San Onofre Breccia), and was created at sea level and then uplifted by tectonic processes to its current elevation. The deposition of marine and non-marine terrace sediments occurred during and after formation of the wave-cut platform. Subsequent erosion of the bluff has created the observed drainage valleys/gullies.

Regional mapping indicates there are no active or significant inactive faults that intersect the subject property. A buried fault (below terrace sediment) is mapped that crosses the

property and is exposed within the bedrock to the south of the lot (fig.3A,B). The closest active fault is the Newport-Inglewood fault zone, located offshore and within five kilometers of the subject site (Fig. 4). For a more detailed discussion of faults in the area, please see the 'Structural Geology' and 'Seismicity' sections.

A surficial landslide/slump is mapped on the subject property. The landslide is contained to the upper 4-6 feet within the non-marine terrace deposits and is located in the central part of property and on the northern flank of the incised gully (Figs. 1, 2, 3). The movement is to the south, consistent with the slope direction of the incised gullies. Furthermore, settlement was noted in the wall nearest the headscarp of the surficial landslides and open fractures were observed in the soil behind the small walls. From personal communication with the neighboring home owners we understand that in 2009, after an intense episode of rainfall, portions of the landslide washed out to the neighboring property below. In addition, small rockfall deposits are observed at the base of the coastal bluff/ bluff, indicating small rockfalls have been occurring in the past and will continue in the future.

Aerial photographs back to 1939 were reviewed and confirm a stable beach environment for over 75 years, indicate minimal erosion in observed the coastal bluff/ocean bluff and that portions of the natural gullies close to South Coast Hwy were filled in during construction phases of the area.

Bluff Edge Determination

For bluff top properties, establishing the bluff edge is required to establish building setbacks (25' from bluff edge). The purpose of the setback *is "so that new development be sited in such a way that it will not be subject to erosion or stability hazard over the course of its design life"* of 75 years (Johnsson, 2005). As previously mentioned, the coastal bluff in the area of the subject lot is unique because the San Joaquin Hills intersect the coastline, forming a series or gullies and small canyons which cut through bluff top. The level or near-level "bluff top" characteristic of many coastal locations is not well defined. The California Coastal Act and Regulations define the oceanfront bluff edge as the upper termination of a bluff, cliff or seacliff. In cases where the top edge of the bluff is rounded away from the face of the bluff, the bluff edge is defined as that point nearest the bluff face beyond which a downward gradient is maintained continuously to the base of the bluff.

The proposed bluff edge presented in this report for 32051 Pacific Coast Hwy is based upon site observations, topographic surveys, research of neighboring properties, and a review of relevant aerial photographs. The bluff edge was determined and is shown on the 2017 topographic map (Fig. 1A) and the city generated topographic map (Fig. 1B). The elevations on both maps are in general agreement. However, there is a lack of topographic data survey points in the immediate area above the bluff top on Figure 1A.

On Figure 1A the top of the bluff is chosen to be at approximately 60-65 feet elevation above datum, whereas on Figure 1B the top of the bluff is chosen to be approximately 70 feet. The 70-foot contour line is more conservative and has been chosen on neighboring properties as the bluff edge contour line. Along the western boundary of the subject property, the bluff (cliff) top is positioned at an elevation of approximately 60-70 feet above sea level (Figs. 1, 1A). Figure 1B, which depicts neighboring properties, shows that the 70-foot contour line is an appropriate bluff top topographic contour for that area.

Lastly realize, that the datum point used in Figs 1A and 1B are different and as can be seen the bluff top is fairly continuous.

The current location of the existing home is approximately 170-180 feet inland from the bluff edge within the property limits and approximately 90 feet from the bluff edge (70-foot contour line) located on the neighboring property (Fig. 1B). Slopes located landward of the bluff top (on the subject property) range from 11° to 33° (See Figs. 1A, 1b, 2 and 3). All slopes landward of the bluff top line are less than 45°. Aerial photographs dating back to 1939 show that the configuration of the coastline and locations of top of the bluff have remained fairly consistent for at least the past 80 years.

Proposed Development

Per our discussions with the property owners and architect, and a review of the preliminary architectural plans, the following development is proposed:

(1) A new multi-story single-family living residence and SRU (second residential unit) is to be construction the property. Excavation into the hillslope on the eastern side is to be performed and will require construction of retaining walls with a retaining height exceeding 6 feet.

(2) A pool and spa are proposed as part of the new construction.

(3) Temporary and/or permanent shoring is required along the northwest and southeast property boundaries to insure stability and safety of excavations during grading and construction. Architectural plans for these specific areas are being formulated. Within the central portion of the subject lot a proper layback of 1H:1V (45°) above a 5.0 vertical cut is achievable. Shoring recommendations are included within this report.

(4) Construction of a patio, courtyard, and other hardscape elements. Small, free-standing privacy and garden walls are also proposed on the property.

(5) All proposed construction is to be setback at least 25.0 feet from the designated 'bluff edge/top of bluff'. Please see Figures 1, 1A, 1B, 2 and 3 for bluff top location and limits of the proposed construction.

(6) Minor grading, including over-excavation and re-compaction of the site sediment, particularly in the eastern half of the subject lot is recommended.

(6) Continuous footing excavations, square pad footings, and caissons may be used to support the new home, temporary or permanent shoring walls, and any proposed retaining walls. All foundation elements are to extend into competent terrace sediment, engineered fill and/or bedrock.

(7) Due to the limited access and extensive vegetation coverage on the property, additional monitoring, exploration, trenching and downhole logging of caisson borings will be required during the demolition, grading, and foundation phases of the project.

Site Geology

Based on a review of the geologic literature, field observations (including geologic mapping of the ocean bluff), and subsurface exploration (Appendix 1, and Appendix 2 - Soil Analysis), the following geologic units were observed:

1. Qtn - Non-Marine Terrace Sediment

The terrace sediment consists of brown to reddish brown silty sand with rock fragments (derived from San Onofre Breccia) and minor clay. The sediment is medium dense to dense, tight and dry. Based upon our site and trench observations and extensive knowledge of the area, the thickness for the terrace sediment may be as great as 60 feet. **The terrace sediment is competent and suitable for foundation support. Any weathered terrace sediment is to be removed or penetrated with the new foundation elements.**

2. Qtm - Marine terrace sediment

Marine terrace deposits were observed above the cliff face, overlying the bedrock unit (San Onofre Breccia). The sand is typical beach sand, composed of medium to coarse grain quartz and feldspar, with minor amounts of magnetite, hornblende and biotite. Thickness ranges from 5-15' in the area.

3. Qafu – Undocumented fill - NOT FOUND ON SITE BUT KNOWN TO BE IN THE AREA

While undocumented fill and/or construction spoils were not encountered in our exploratory trenches or observed elsewhere at the surface, its existence is well documented in the surrounding area. During the construction of South Coast Hwy, construction spoils were often pushed seaward onto adjacent lots. Typically these deposits are uncertified, loose soil, and contain rock fragments, brick, and shells. A review

of the city file for the neighboring lot to the south revealed that undocumented fill was placed adjacent to Coast highway and near the boundary of our subject lot

All uncertified fill is considered unsuitable for purposes of foundation support, and is to be removed or penetrated with any new foundation elements.

4. Tso – San Onofre Breccia (bedrock)

The bedrock unit is clearly exposed within the lower sections of the coastal bluff, adjacent to the beach. The bedrock unit is a well-bedded to massive breccia and coarse-grained sandstone. No potential rupture surfaces, such as clay/shale layers, were observed during our investigation of the cliff face. Bedding in the area is obliquely out of slope (Fig. 4A,B) However, the overall strength of the rock and steep and varied inclination of strata, producing a buttressing effect, more than compensate for the out of slope orientation. Water seeps were observed on the cliff face. Minor rockfall deposits (talus) have been reported at the bluff base but presently are covered with beach sand and vegetation. The erosion of small rocks and debris will continue to take place as the bluff face weathers.

The bedrock unit, in an un-weathered state, is highly competent and more than suitable for purposes of foundation support. We do not anticipate that bedrock will be encountered during excavation for the proposed foundation and shoring elements. However soil parameter recommendations are included for rock should deep foundation elements are needed.

Structural Geology

Bedrock beneath the site is assigned to the San Onofre Breccia Formation. Locally, the bedrock unit consists of massive to well-bedded breccia and sandstone with occasional interbedded siltstone layers. Bedrock is exposed on the bluff face of the subject property as well as on neighboring properties. Regional bedding attitudes indicate strata in the area dip to the southeast between 29° and 35°. Field measurements agree well with these bedding attitudes (Figs. 1-3). With reference to the subject site, strata within the bedrock unit are oriented obliquely out of slope (worse case), a non-preferable orientation for purposes of slope stability and construction.

No active or significant inactive faults are mapped transecting the subject property. A fault is observed transecting the property and can be observed in outcrop in rock in the cliff face to the south of the lot. The fault is buried beneath terrace sediment and is considered inactive. This fault is not an issue of concern for stability of the site and the proposed construction. An additional fault trace is located more than 1000 feet to the east and is likely part of the Laguna Canyon fault zone. The Laguna Canyon fault zone is considered inactive, with no reported movement during Holocene (11,000 yrs BP) or Pleistocene (11,000 to 1,800,000 yrs BP) time.

The nearest active fault is the Newport-Inglewood fault zone, located offshore, less than 5 kilometers southwest of the subject site (Fig. 5). This fault is a continuous 240 km or greater long, 400-4000 meter wide fault zone consisting of strike slip faults, folds and related thrust faults. It extends from the Cheviot Hills along the western side of the Los Angeles Basin to La Jolla through San Diego Bay and possibly beyond the international border. Offset in the section between the deep axis of the Los Angeles Basin and the Pelican Hills Fault segment (Newport Beach area) is estimated to be approximately 7 km of right lateral motion with an estimated slip rate of 1.3 - 2.2 mm/yr. Although predominately strike slip in motion, oblique faulting, both divergent and convergent, and blind thrust faulting have been reported in the area. The last significant rupture on this fault zone occurred on March 10th, 1933, and registered a Richter magnitude of 6.3. The earthquake killed 115 people and was the second most deadly earthquake in California history. **It is estimated that the fault is capable of producing a 6.0-7.4 moment magnitude earthquake.**

Most recently, the California Geological Survey has designated the San Joaquin Hills blind thrust fault as an active B type fault. The basis of this classification is found in Grant et al. (1999) and Rivero et al. (2000). The hypothetical model assumes a 23° dip to the southwest, extending 2 to 8 km in depth. The rupture bottom is approximately coincident with the location of the offshore Newport-Inglewood fault zone. A slip rate of 0.5 +/- 0.2 mm/yr is based on the average late Quaternary uplift rate of the San Joaquin Hills of 0.21+/-0.27 mm/yr and inferred dip of 20° to 30°. The area of uplift extends at least 38 km from northwestern Huntington Mesa south to Dana Point (Fig. 6). The movement on the San Joaquin Hills Blind Thrust is a product of partitioned strike slip and compressive shortening across the Newport Inglewood fault zone (Grant et.al. 1999). "....Other than observations of an elevated marsh bench in Newport Bay and sparse microseismicity, we do not have any direct evidence of Holocene activity of the San Joaquin Hills Thrust."(Grant et al., 1999).

In reference to the subject lot, the Newport Inglewood fault and San Joaquin Hills blind thrust fault should be considered the primary causative faults.

Seismicity

There are no active faults that pass through the site. The nearest known active faults are the Elsinore fault and an extension of the Newport-Inglewood Fault, located offshore less than 5 kilometers southwest of the subject site (Figs. 7a, 7b). The Elsinore and Newport-Inglewood fault zones could produce an earthquake of magnitude 6 to 7 on the Richter scale, with local strong ground motion equivalent to at least VIII-IX on the modified Mercalli Scale. It is estimated that the Newport-Inglewood fault is capable of producing a 6.0-7.4-moment magnitude earthquake, while the Elsinore fault could generate a moment magnitude earthquake between 6.5 and 7.5.

The entire southern California area is susceptible to strong shaking (Figs. 8a, 8b) from earthquakes originating from the Newport-Inglewood Fault, the Whittier-Elsinore Fault, the San Jacinto Fault and the San Andreas Fault (Figs. 7, 8). Recently, a 5.9 magnitude earthquake in the Whittier Narrows area in 1987 produced $400 million in damages. The Whittier Fault is a northern branch of the Elsinore fault. The largest earthquake within the last 100 years in southern California occurred in July of 1992, with a magnitude of 7.4 on the Richter scale. The epicenter was located in Landers, California, approximately 5 miles north of Twenty-nine Palms. This earthquake produced movement on inactive faults 10-15 miles away. The displacement on these faults was a maximum of 6 feet vertically and 13 feet horizontally. Within the past 25 years, a 6.6 magnitude earthquake occurred (January 17, 1994) in the San Fernando Valley in the area of Northridge causing major damage. Movement on a blind thrust fault (a fault not previously mapped) created the earthquake and subsequent aftershocks. Estimated damage is over 15 billion dollars. This earthquake was felt in the Laguna Beach area and caused minor damage. Aftershocks from this earthquake and the Landers earthquake will continue for years. Within the last 18 years (10/16/99) another Mw 7.1 earthquake occurred northeast of Twenty Nine Palms area (Hector Mine earthquake). The earthquake was centered on a previously inactive fault. Recent releases of priority seismic data from oil companies and publications (Grant, et. al. 1999), and mapping of an active offshore blind thrust fault (Oceanside Thrust) extending from offshore Oceanside to the intersection of land in the San Joaquin Hills area (Rivero, et. al., 2000) suggest that blind thrust faults are present in the north and south Orange County area. These blind thrusts may be capable of producing infrequent but similar magnitude earthquakes.

A large earthquake, magnitude 6.3 occurred off of Newport Beach on March 11, 1933, and a 4.6 to 4.9, magnitude earthquake occurred just offshore from Newport Beach on April 7, 1989. Both of these earthquake epicenters were on the Newport-Inglewood fault line. In 1812, an earthquake occurred near San Juan Capistrano and was of sufficient magnitude to almost completely destroy the mission. Unfortunately, no records were kept and only speculative details can be surmised. In Laguna Beach, a 4.5 magnitude earthquake occurred on October 27, 1969. The epicenter of the earthquake was located 1000 feet offshore of Crescent Bay. From 1934 to 1937 earthquakes with epicenters west of Emerald Bay and magnitudes ranging from 1.5 to 2.0 were reported. A 2.0 earthquake occurred within one mile of the coast in South Laguna on July 31st of 1937. Within the last 5 years another small earthquake occurred in the South Laguna Beach area. Epicenters of five minor earthquakes have been located within the Dana Point area during the period 1934 - 1971. The magnitudes ranged from 2.0 to 3.5 on the Richter Scale. In Irvine, minor earthquakes of 3.0 and 2.9 on the Richter scale occurred in 1935 and 1971, respectively. As recently as 4 months ago (July 2009) a 7.1 moment magnitude earthquake occurred in the Trona-Ridgecrest area of southern California and was felt in the Laguna Beach area. After shocks from this earthquake will be felt for years.

Assuming an earthquake with a focus depth of 6 km and an epicenter distance of 10 km, a peak rock acceleration of 0.6 g could be generated by a 6.0-6.4 magnitude earthquake (Boore, 1978). Ploessel and Slosson (1974) propose that 65% of anticipated peak acceleration be used in design purposes in the absence of more site specific data to determine the repeatable high ground acceleration which normally follows the peak acceleration in a seismic wave train. This 65% value would be 0.4 g, a value very similar to that suggested by the California Building Code. Although in excess of the code, experience suggests that lightweight conventional structures should perform well if designed to code standards. The United States Geologic Survey (USGS) also provides seismic data based upon a probabilistic analysis corresponding to longitude and latitude. The current standard practice in seismic analysis allows for a probabilistic seismic hazard analysis (PSHA) which estimates the peak ground acceleration from an anticipated earthquake with a 2% probability of exceedance in a 50 year period. Their data suggests a PGA = 0.650g (Appendix 4) with a 2% probability of exceedance in 50 years for a firm rock site. The owners and future owners are to be aware of this seismic potential.

This property has a low probability to be subjected to the seismic and associated hazards discussed in this report. Our recommendations to be incorporated into the foundation design will help mitigate these potential hazards. Other nearby residences will be subjected to similar geologic hazards. Single-family residences are not designated for a special study under the Alquist-Priolo Special Studies Act. Ground rupture on this site as a result of seismic shaking has a low probability to cause damage if a seismic event were to occur. A seismic design of the structure should follow our recommendations and certain assumed (previously mentioned) ground acceleration factors common to present geotechnical practice. At the time of our visits, there was no evidence of active faulting or ground rupture on the site. However, the majority of accelerometers placed by California Institute of Technology exceeded 1g force as a result of the last San Fernando Valley Earthquake. Should accelerations of that force occur in our area, major damage will result. Earthquake insurance is recommended.

The subject site is partially mapped within a potential earthquake-induced landslide hazard zone and the beach seaward of the residence is in a liquefaction zone as determined by the State of California (Fig. 9).

All construction for the new residence will likely occur at least back from the top of the slope (away from the top of the surficial slump area) and provide a setback equal to or greater than H/3 as required by CBC code. For a more in-explanation see the slope stability section and figures 1-3.

Tsunamis

Tsunamis (seismic sea waves) are generated on offshore faults by movement that is primarily vertical in nature (normal, reverse, or dip-slip). The majority of faults located

offshore in Southern California are primarily strike-slip or horizontal in motion. Respective to vertical motion, horizontal motion does not produce significant tsunamis and it is estimated that tsunamis can generate a wave and wave surge up to approximately 4 meters (12.5 feet) in the Southern California area (Legg et al., 2003). Legg et al. (2003) also suggest, based on slip rates, that a recurrence interval of 200-500 years for a large Tsunamigenic earthquake should be considered. The eastern half of the lot, where construction is proposed, lies at an elevation of 143-169 feet above sea level. The earthquake of 1812 was associated with the largest tsunami ever reported in California. The wave may have reached as high as 50 feet above sea level (Wood and Heck, 1966). The likelihood of significant damage from tsunamis is low for the subject site based on its elevation above sea level and the strike-slip nature of nearby active faults (i.e. Newport-Inglewood). However, historical evidence suggests that damage due to tsunamis is possible for the sections of the site furthest seaward, specifically in the lower portion of the ocean bluff and beach. Homeowners, present and future, should be aware of this potential. Tsunamis that damage California coastlines are generally generated from large earthquakes a great distance away (i.e. Alaska, 1964). Ample warning systems already exist for such events. However, very recent research indicates that a tsunamis generated by an earthquake-induced submarine landslide may give very little warning to coastal inhabitants.

Slope Stability

A slope stability analysis has been performed for the subject site, including the ocean bluff. Phi and cohesion values for the terrace sediment have been generated from a sample taken at the site and are 29° and 310 psf, respectively. The sample was collected within Trench #1 at a depth of ~6.0 feet (see Appendix 1 & 2). Phi and cohesion values of 40° and 2700 psf have been used for the bedrock unit. These values were derived from a breccia sample collected from 31889 Circle Drive - located approximately 500 feet north of the subject site and further substantiated by the reported unconfined compressive strength of 243,400 pounds per square foot for the San Onofre breccia sampled at the Laguna Beach mobile home park (Borella geology, 2014). Even reducing this value by a safety factor of 3, the rock sample still generates a cohesion of 16,000 pounds per square foot and a phi of 50°. We consider our phi and cohesion values for the bedrock unit to be conservative and appropriate for the subject site. Bedding attitude is oriented obliquely out of slope and is not preferable for purposes of slope stability. As a result, anisotropic conditions (for out of slope bedding) have been utilized within the stability analysis. Finally, the entire bluff height was used in the stability calculations and assumes that all of the beach and talus debris is not present, even though it probably does provide some lateral support for the bluff.

A two dimensional stability analysis was run for both static and pseudostatic cases utilizing GSTABL7 v.2 with STEDwin. A circular analysis was performed using the Modified Janbu method. **All generated factor of safety values exceeds the required 1.5 and 1.1**

for static and pseudostatic cases, respectively (see Appendix 2 – Stability Analysis). Our stability analysis indicates the site is grossly and pseudostatically stable.

Examination of aerial photographs dating back to 1939 showing the coastline and subject lot indicate that the site has remained grossly stable for a period of at least 76 years. However, erosion and small surficial failures within the bluff terrace sediments have taken place and will continue to do so. The slopes in the western half of the lot are to be considered surficially unstable. The proposed site-specific drainage system is to direct all site water (surface and subsurface) away from the ocean bluff and area to the south (see Recommendations section).

The state of California Seismic Hazard Map for the Dana Point Quadrangle (2001) partially places this site in an area of potential earthquake-induced landslides (Fig. 9).

Conservatively, we have recommended that any new foundation elements supporting the southwestern limit of the proposed new living residence be located landward of a 1.5 H:1V setback line as shown on Figures 2 and 3 (Section AA' and BB') and be setback from the top of the slope of the slope and penetrate all creep zones. In addition, any new foundation elements are to satisfy an H/3 horizontal slope setback distance of 40 feet (Figs. 2,3) in order to satisfy this requirement. For example, to satisfy the current code requirement, foundation elements supporting the furthest seaward portion of the existing home would have to extend to a depth of 32 feet (Fig.2,3). Our suggested recommendation to avoid surficial erosion and deep caisson foundation embedment would be to setback the new home 25 feet back from the top of the slope.

Flood Hazard

Flooding is not an issue of concern for the subject site. A proper subsurface and surface drainage system is to be implemented as part of the proposed new construction.

Liquefaction Potential

Liquefaction is not an issue of concern for the subject lot. Old compacted competent terrace sediment and bedrock lie beneath the site property. No significant water was encountered within the terrace sediments. Seasonal fluctuations associated with increased rainfall in the area commonly produces water migration along the terrace-bedrock contact.

The site is not mapped in a zone of liquefaction potential. as determined by the state of California (fig. 9).

Summary of Conclusions

Based upon our review of pertinent geologic literature and recent geotechnical investigation, it is our opinion that the proposed development is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are incorporated into the project plans, specifications, and followed during site grading and construction. The following is a summary of the geotechnical issues related to the subject site and proposed construction.

1) Based upon our site excavations and geologic observations made on-site and adjacent to the property, the site is underlain by non-marine and potentially marine terrace sediments overlying bedrock assigned to the San Onofre Breccia formation. Bedrock is exposed and clearly observed on coastal bluff. We estimate that the thickness for terrace sediment beneath the site ranges from 50-70'. The terrace sediment and bedrock unit were both found to be hard, dense, and suitable for foundation support.

2) No active faults are mapped transecting the subject property. The closest active fault is the Newport-Inglewood fault, located offshore, and less than 5 kilometers southwest of the property.

3) A surficial landslide is mapped on the subject site. Other minor surficial failures and erosion features are evident in the terrace sediment. Small rockfall/talus deposits are also observed at the bluff base.

4) This property has a low probability of being affected by earthquake hazards if recommendations contained within this report are <u>not</u> implemented into the final design and construction. The primary causative faults are the Newport-Inglewood fault and San Joaquin blind thrust fault. The United States Geologic Survey estimates a peak ground acceleration of 0.65g with a 2% probability of exceedance in 50 years for the subject site.

5) The potential for damage from tsunamis is considered low for the site and proposed construction.

6) Our slope stability analyses indicate the site is grossly and pseudostatically stable. The owners should be aware that the terrace sediments adjacent to or at the bluff edge will continue to erode and fail surficially. In addition, small rockfalls will continue to occur where the bluff is steepest.

7) Groundwater was encountered during our site investigation. Mineral efflorescence observed on the bluff face is a clear indication that water is migrating at the terrace-bedrock contact and onto the bluff face. We do not anticipate groundwater problems during the proposed construction. Flooding

should not be an issue of concern for the subject site as long as a proper drainage system is maintained/installed during construction and maintenance of the new storm drain system is continued.

8) Liquefaction is not an issue of the concern for the subject site and proposed development. Competent terrace sediment and bedrock are present beneath the property. No water was encountered within our site exploratory borings, but should be expected at the terrace-bedrock contact especially during high rainfall periods. The beach at the base of the bluff has been designated as a potential liquefaction hazard zone.

9) Temporary and/or permanent shoring is anticipated and recommended particularly along the northwest and southeast property lines. Within the central section of the lot, temporary retaining wall cuts exceeding a vertical height of 5' can be properly laid back above this height at a slope gradient of 1H:1V (45°) and within the site property boundaries. Temporary cuts are to remain open for a period <u>not</u> to exceed 1 month.

10) Over-excavation and re-compaction of on-site uncertified fill in the eastern half of the site is recommended.

Recommendations

The following recommendations are to be considered preliminary and should be incorporated into any new foundation design, site grading, construction, and maintenance. Moreover, they should be considered minimal from a geotechnical perspective because there may be more restrictive requirements from the architect, structural engineer, building codes, governing agencies, and/or the owner. A grading plan review should be performed by our office prior to the start of any earthwork activities. Similarly, foundation plans should be reviewed by our office prior to city or county submittal. Additional and/or revised recommendations may be provided at the conclusion of plan review, including recommendations for additional subsurface investigation, laboratory testing, and design.

The geotechnical impact of construction on this lot and that of adjoining properties is nil as long as proper care is taken in site preparation, grading, and construction of foundation elements, including emplacement of slabs, caissons, conventional and pad footings, shoring and retaining walls, and drainage. It is our opinion the site is adequate for its intended use. This office should be retained to ensure that all recommendations, provided herein, are implemented properly. Coordination between the site architect, civil and structural engineer, city of Laguna Beach officials, and this office, is essential.

1. Site Grading, Over-excavation and Re-compaction

All site grading should be performed in accordance with the criteria set forth by the City of Laguna Beach and the standard grading specifications presented within Appendix 3. In case of conflict, the following recommendations shall supersede those included in Appendix 3.

All significant amounts of organics are to be removed from areas to be graded. The lower 6 inches of loose materials can be processed in place, in lieu of removal and re-compaction. All processing, removal, over-excavation, and re-compaction should be supervised and approved in writing by a soil engineer and a representative of this office.

As previously discussed, over-excavation and re-compaction is to be conducted to a minimum depth of 3.0 feet, ensuring a depth of 2.0 feet below the bottom of footing excavations. Furthermore, the over-excavation and re-compaction should extend a minimum of 5.0 feet laterally beyond the proposed outer edge of foundation elements supporting the new living residence where possible. If necessary, for perimeter hardscape elements (including driveway), over-excavation and re-compaction is to be performed to a minimum depth of 2.0 feet and should also extend laterally 5.0 feet beyond the outer edge of the proposed improvements (where appropriate).

2. Site Clearing

All trees, stumps, organic material, refuge and construction debris should be removed and disposed of in a proper manner. All soil, fill material, weathered terrace sediment, and/or rock debris excavated from the lot, or out of footings, should be disposed of offsite in a proper manner. No debris or spoils from the excavations are to be placed on the top of upper portions of any slopes. Excavated earth materials, left at the top of any slope, will increase the potential for failure.

3. Compaction standard

All onsite soil materials are anticipated to be suitable as compacted fill. These materials must be placed at or near optimum moisture content and compacted under the supervision of a soil engineer to at least 90% of the maximum dry density as prescribed by ASTM D 1557. The in-situ ground beneath compacted soils should be tested and have a dry density of at least 85% of the maximum dry density.

4. Utility Trench Backfill and Compaction

All trenches should be backfilled with approved fill material, compacted to relative compaction of not less than 90 percent of maximum dry density (per ASTM Test Method D1557). The backfill should be compacted in uniform lifts (generally not exceeding 8 inches in compacted thickness) by mechanical means. Care should be taken during backfilling to prevent utility line damage.

The onsite soils may be used for backfilling utility trenches from one foot above the top of pipe to the surface, provided the material is free of organic matter and deleterious substances. Any soft and/or loose materials encountered should be removed and replaced with properly compacted fill or adequate bedding material.

Onsite soils are considered suitable for bedding or shading of utilities. Imported soils for pipe bedding should consist of non-expansive granular soils. Bedding materials should consist of sand with a sand equivalent value (ASTM Test Method D2419) of not less than 30.

If sandy soils are used for trench backfill, the backfill should be topped with a minimum 2-foot thick cap of compacted fine-grained soil. Also, a minimum 10-foot length of trench at the entrance and exit points of structures should be backfilled with fine-grained soils to serve as a plug to prevent water migration into structure foundation support zones.

The walls of temporary construction trenches are expected to be stable when excavated nearly vertical, with only minor sloughing, provided the total excavation depth does not

exceed 5.0 feet. Shoring of excavation walls or flattening of slopes will be required if greater excavation depths are necessary.

Trenches should be located so as not to impair the bearing capacity of soil or cause settlement under foundations. As a guide, trenches parallel to foundations should be clear of a 45-degree plane extending outward and downward from the edge of the foundations. All work associated with trenches, excavations, and shoring must conform to the State of California Safety Code.

5. Cut-Fill Transitional Zones

Cut-fill transition zones are anticipated. All new foundation elements supporting the new living residence are to be embedded into competent terrace sediment or engineered fill. If any transitional zone is encountered, the transitional zone is to be over-excavated and re-compacted as stated above to provide a uniform soil base. Alternatively, the foundations in the area may be deepened into bedrock.

6. Temporary Stability for Site Excavations

Maximum height for temporary vertical cuts (for retaining walls) within the interior of the lot is to be 10.0 to 12.0 feet. All temporary retaining wall cuts can be properly laid back at a slope gradient of 1H:1V – 45° within the property boundaries.

Temporary or permanent shoring is recommended and will be placed along the northwest, southeast, and southwest property boundaries. These areas are to be delineated on the final plans. **We recommend that temporary shoring walls be designed for an equivalent fluid pressure of 35 pcf**. Recommendations for bearing and lateral pressure within the bedrock and terrace units are given in subsequent sections. Recommendations for permanent shoring are provided in the Retaining Wall section.

Temporary cuts are not to exceed a time period of 30 days. This proposed time duration takes into account seasonal variations. All uncertified fill (if present) and weathered/rooted terrace sediment is to be laid back at a slope gradient of 1H:1V (45°). Our office will be present during grading/excavation to inspect all temporary cuts and associated laybacks.

In general, construction excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter the site. Soil/sediment/rock conditions should be mapped and frequently checked by a representative of Borella Geology Inc, (BGI) to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person" required by OSHA

standards to evaluate the soil/sediment/rock conditions. Close coordination with the geotechnical consultant should be maintained during construction. Excavation safety is the responsibility of the contractor.

7. Bearing Capacity and Settlement

It is anticipated that new foundation elements for the new living residence and SRU will be founded in competent bedrock (San Onofre Breccia), non-marine terrace sediment, or certified fill . Assumed bearing value allowed by the California Building Code (2016), Table 1806.2, for competent rock is **4000 pounds per square foot**, and for competent terrace sediment and certified/engineered fill (silty sand & sandy silt) **2000 pounds per square foot** should not be exceeded. These values should not be exceeded and may be increased by one-third for wind and seismic loads. The bearing values assume a minimum footing width of 12 inches and a minimum depth of 12 inches into natural grade. It is recommended that perimeter footings be 18 inches deep (15 inches wide) for one-story structures and 24 inches deep (18 inches wide) for a two-story building embedded into competent earth material. Square pad footings are to be as least 24 inches deep and 24 inches wide. This value applies for all foundations, hardscape, roads, and driveways that are to lie in competent terrace sediment or certified/engineered fill. As shown on Figure 2, foundation elements supporting the furthest seaward limit of the proposed new living residence are to extend to a minimum depth of 5.0 feet. Continuous footings may be deepened or square-pad footings with connecting grade beams may be designed in this area. Settlement of footings is anticipated to be within acceptable limits for this type of design. It is estimated that the maximum settlement is approximately ½-inch with a differential settlement of ¼-inch over a distance of 40 feet.

8. Lateral Pressure and Sliding

Lateral loads are resisted by passive pressure forces present in front of footings and by friction acting at the base of the footings.

A lateral bearing (passive earth pressure) of 400 pounds per square foot per foot of depth is recommended for bedrock. For competent native sediment or engineered fill a lateral bearing pressure of 150 pounds per square foot per foot of depth is recommended. The lateral bearing values shown above may be increased by the designated amount for each foot of depth to 15 times the designated value as per 2016 CBC code, Section 1806.3.3. A lateral sliding coefficient of **0.35 (bedrock)** and **0.25 (terrace sediment/engineered fill)** between foundation and earth materials may be assumed. The lateral sliding coefficient is to be multiplied by the dead load.

The values presented above assume that footings will be poured neat against the earth materials. The friction and passive resistance value presented above may be used in combination without reduction. These parameters reflect a safety factor of 1.5.

9. Caissons

Caissons may be used for foundation support for anticipated shoring and foundations located around the lot perimeter and within 25 feet of the top of the slope.

Shallow caissons embedded into competent bedrock may be designed for both end bearing and friction. Twenty-four inch diameter caissons embedded into competent bedrock (San Onofre Breccia Formation) or competent terrace sediment may be designed for an allowable bearing capacity of 4000 (bedrock) and 2000 (terrace sediment) pounds per square foot per foot of depth. A skin friction of 400 pounds per square foot may be used in bedrock and 250 pounds per square foot in terrace sediment and engineered fill. These values may be increased by one-third for wind and seismic loads.

Caissons supporting any structure are to extend into competent bedrock or terrace sediment. Depending on location, caisson depths may range up to 25-32 feet minimum. The proposed caisson depths will provide an H/3 horizontal setback distance as required by city code and will ensure that caissons penetrate a minimum of into competent terrace sediment and/or bedrock for the shoring walls and structures. The depth of the caissons may change when locations of needed shoring walls are identified.

Lateral resistance may be computed utilizing 400 pounds per square foot per foot of depth in the bedrock. A lateral resistance of 150 pounds per square foot per foot of depth may be used in competent terrace sediment. The lateral resistance value shown above may be increased by the designated amount for each foot of depth to 15 times the designated value as per 2016 CBC code, section 1806.3.3. An allowable coefficient of 0.35 for friction at the base of each caisson may be assumed for bedrock and 0.25 for terrace sediment. Foundations should be reinforced in accordance with the requirements of the structural engineer. It should be noted that these resistant forces appropriately reflect a factor of safety of 1.5.

Twenty-four inch diameter caissons (minimum) or 2' by 2' wide square pads are recommended so that in-hole observations can be made during construction and to assure proper depth into competent rock and cleanout by the contractor is achieved. The contractor is to ensure that the geologist can be lowered into the hole safely and efficiently. If loose or caving materials are encountered during construction and downhole inspection, temporary casing is to be provided and installed. No steel or concrete is to be placed in the caisson boreholes until the holes are observed and approved by the engineering geologist of record. No caisson boreholes shall be excavated within a 6-foot distance from the nearest edge of a concrete filled caisson unless the concrete has cured for more than 24 hours.

Settlement due to structural loads is anticipated to be within acceptable limits for this type of design. It is estimated that the maximum settlement will be less that ¼-inch. Differential settlement is anticipated to be similar to the total settlement and most settlement will occur as the loads are applied during the construction.

Creep should be anticipated within the weathered rock or terrace sediment to a depth of 5 feet. For any caissons located in an area exposed to downslope creep, a potential creep pressure loading force of 1000 pounds per linear foot acting on each caisson is to be included. Passive resistance may be taken only below the creep zone.

Any grade beams used to structurally tie the caissons laterally that lie parallel or sub-parallel to topographic contours are to be poured above grade to remove any exposure to creep forces. Joint consultation between the structural engineer, geotechnical engineer, and engineering geologist as to final caisson-grade beam locations is imperative. The values assume that footings will be poured neat against the earth materials. The above values of friction and passive resistance may be used in combination without reduction. These parameters reflect a factor of safety of 1.5.

10. Reinforcement of Footings

To resist the effects of tension cracking due to slight soil and/or rock imperfections or seismic shaking, a minimum of two no. 5 bars should be placed at the top and bottom of continuous footings.

11. Seismic Design Parameters

The seismic design for the proposed structure should be designed in accordance with the 2016 California Building Code. The determination of seismic parameters is based on Section 1613 of the 2016 CBC and USGS online information (Appendix 4). Site coordinates of latitude 33.4967° N and -117.7396° W were utilized in our analyses. The initial results of our analyses for the maximum considered earthquake (MCE) spectral response accelerations (S_s and S_1) are presented in the following tables.

Seismic Design Values

Selected Parameters from the 2013 C.B.C Section 1613 – Earthquake Loads	Seismic Design Values
Site Class per Table 1613.5.2	D
Spectral Acceleration for Short Periods (S_s)*	1.574g
Spectral Accelerations for 1-Second Periods (S_1)*	0.584g

Site Coefficient F_a per Table 1613.5.3(1)	1.0
Site Coefficient F_v per Table 1613.5.3(2)	1.5

*Calculated from the USGS computer program "Design Maps Summary Report and Design Maps Detailed Report.

The spectral response accelerations (S_{MS} and S_{M1}) and design spectral response acceleration parameters (S_{DS} and S_{D1}), adjusted for Site Class B were evaluated for the site in general accordance with Section 1613 of the 2016 C.B.C. The adjusted site class parameters are listed in the table below.

Seismic Design Values Modified for Site Class D
Fa=1.0 Fv= 1.5

Selected Parameters from the 2010 C.B.C. Section 1613 – Earthquake Loads	**Seismic Design Values Modified for Site Class D**
Site Modified Spectral Acceleration for Short Periods (S_{MS}) for Site Class D [Note: $S_{MS} = F_aS_s$]	1.574g
Site Modified Spectral Acceleration for 1-Second Periods (S_{M1}) for Site Class D [Note: $S_{M1} = F_vS_1$]	0.877g
Design Spectral Acceleration for Short Periods (S_{DS}) for Site Class D [Note: $S_{DS} = (2/3)S_{MS}$]	1.049g
Design Spectral Acceleration for 1-Second Periods (S_{D1}) for Site Class D [Note: $S_{D1} = (2/3)S_{M1}$]	0.584g

The minimum seismic design should comply with the 2016 edition of the California Building Code (CBC) and ASCE 7-10 using the seismic coefficients used in the table above. See Appendix 4.

The USGS finds a maximum PGA of 0.65 for the study site location.

12. Design of Slab on Grade for New Living Residence

All slab on grade design falls under the purview of the structural engineer of record. The following guidelines are recommended. For any slabs on grade, no. 4 bars, 18 inches on center both ways, are to be located in the center of the slabs to minimize shrinkage cracking and differential movement. This is recommended as a minimum. Slabs placed in very low expansive earth materials should be at least 5 inches thick, with a 15-mil stegowrap moisture barrier plus 2 inches of sand or gravel above and 2 inches of sand or gravel below the moisture barrier. This is a minimum requirement. The moisture barrier is to lapped and sealed on the edges. Compacted soils should be in a thoroughly moist condition. The criteria for a "thoroughly moist" condition is to be 3% over optimum moisture content (which is 8.05% for the site earth material). This would make a "thoroughly moist" condition 11.0% for the site sediments. We consider this acceptable from a geotechnical perspective, given the composition of the site sediments. The soil engineer of record is to verify the moisture content within 3 days, prior to pouring the concrete slabs. Pre-soaking of the slab sub-grade prior to the placement of the slab will be required if the moisture content does not meet this criteria. Concrete road or driveway slabs should be provided with saw cuts or cold joints every 10 feet or less and should be at least 5 inches thick. Any utility lines placed under a slab are to be wrapped and waterproof. It is best if no utility lines lie beneath a slab. High corrosivity of subterranean pipes is to be assumed. Additional recommendations and modifications provided by the structural engineer may supersede these recommendations.

13. Non-structural Concrete Flatwork

Concrete flatwork (e.g. patios, walkways, private driveways) has a high potential for cracking due to changes in soil volume related to soil-moisture fluctuations. To reduce the potential for excessive cracking and lifting, concrete should be designed in accordance with the minimum guideline outlined in the table below. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints, but will not eliminate all cracking or lifting. Thickening the concrete and/or additional steel reinforcement will further reduce cosmetic distress. Architectural flatwork at the site should be designed by the architect/engineer to include the following minimum features.

Nonstructural Concrete Flatwork

	Homeowner Sidewalks	Private Drives	Patios/Entryways	City Sidewalk, Curb and Gutters
Minimum Thickness (in.)	4 (nominal)	5 (full)	5 (full)	City/Agency Standard
Presoaking	3 % of optimum m/c to 12 inches	3% of optimum m/c to 12 inches	3% of optimum m/c to 24 inches	City/Agency Standard
Reinforcement	—	No. 4 at 18 inches on centers	No. 3 at 18 inches on centers	City/Agency Standard
Thickened Edge	—	12" x 12"	12" x 12"	City/Agency Standard
Crack Control	Saw cut or deep tool joint to a minimum of 1/3 the concrete thickness	Saw cut or deep tool joint to a minimum of 1/3 the concrete thickness	Saw cut or deep tool joint to a minimum of 1/3 the concrete thickness	City/Agency Standard
Max. Joint Spacing	5 feet	10 feet or quarter cut whichever is closer	6 feet	City/Agency Standard
Aggregate Base	—	2 inches	2 inches	City/Agency Standard

14. Retaining Wall (including Shotcrete Walls) Design Considerations

Maximum height for retaining walls is 10.0 to 12.0 feet.

The following geotechnical parameters are to be utilized for design of the onsite retaining walls. Our laboratory analysis indicates the site sediment/rock has a very low expansion potential, and therefore is suitable as backfill for the proposed retaining walls. **However, it is our recommendation that the site retaining walls be backfilled with geotechnically approved granular materials.**

Conditions	Equivalent Fluid Weight (pcf)			
	Level Backfill		2H:1V Backfill Sloping Upwards	
	Native	Imported* Sand SE > 30 or gravel (3/4-inch preferred)	Native	Imported* Sand SE > 30 or gravel (3/4-inch preferred)
Active	45	**33**	60	**45**
At-Rest (constrained)	70	**50**	90	**70**

*granular backfill recommended

The equivalent fluid pressure values assume free-draining conditions. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be requested by the structural engineer on an individual case basis. Retaining wall structures should be provided with appropriate drainage and waterproofing (see Subdrain Recommendation below).

Surcharge loading effects from any adjacent structures should be evaluated by the wall designer. Any building or traffic loads located within a 1:1 (horizontal to vertical) projection from the base of the retaining structure should be added to the applicable earth pressure. A minimum additional uniform lateral pressure of 100 psf for the upper 10 feet should be added to the recommended lateral earth pressures to account for typical vehicle traffic loading located within the zone of influence of the proposed retaining structure.

All retaining wall footings are to be founded in competent rock, terrace sediment and/or or engineered fill. For sliding resistance, a friction coefficient of 0.35 (bedrock) and 0.25 (terrace sediment) may be used at the concrete and rock/sediment interface. A passive resistance of 400 pounds per square foot per foot of depth in bedrock, and 150 pounds per square foot per foot of depth in terrace sediment and/or engineered fill, limited to 15 times the passive resistance, is recommended. The passive resistance may be increased by 1/3 when considering loads of short duration such as wind or seismic loads. These resisting force values reflect a safety factor of 1.5, as prescribed by the 2016 California Building Code.

15. Seismic Lateral Pressures on Site Retaining Walls

Seismic lateral pressures are to be accounted for in the design of any site retaining walls that retain greater than 6 feet in height of backfill (CBC 2016, 1803.5.12). A peak ground acceleration should comply with the 2016 edition of the California Building Code (CBC) and ASCE 7-10 using the seismic coefficients previously discussed. Applying the Mononobe-Okabe Method for seismic earth pressure on retaining walls, a retaining wall with a height greater than 6 feet will have to be designed to accommodate an additional **10.5 psf/ft** of wall for potential earthquake motions. Please see attached sheet (Appendix 4) for a detailed explanation of retaining wall seismic loading. This value represents a maximum force and should be reduced according to anticipated retaining height. Whether seismic lateral pressures are required for exterior retaining walls is a decision of the governing city.

16. Subdrain Design

An approved drainage system behind retaining walls is essential to control seepage forces. Examples of a drainage designs behind a retaining wall or shotcrete retaining walls are found in Appendix 4. This design consists of a fabric wrapped gravel envelope placed in contact with undisturbed native material. Collection is with a 4 inch diameter perforated plastic pipe embedded a minimum of 10 linear feet in the gravel envelope tied to a 4 inch diameter non-perforated plastic pipe which discharges at convenient locations selected during foundation plan review. The pipe should be placed such that the gradient is not less than 0.02 ft./ft. The fabric wrapped gravel envelope should be placed at a similar gradient.

All drainpipes should be SDR-35 or Schedule 40. Perforations may be either bored 3/16-inch diameter holes or 1/8-inch slots placed on the bottom one-third of the pipe perimeter. If the pipe is to be bored, a minimum of 10 holes should be uniformly placed per foot of length. If slots are made, they should not exceed 2.5 inches in length and should not be closer than 2 inches. Total length of the slots should not be less than 50% of the pipe length and should be uniformly spaced.

The fabric mat should be 70 mesh. However, in no case should pore spaces exceed equivalent 30 mesh openings or be less than equivalent 100 mesh openings. The fabric should be placed such that a minimum lap of 6 inches exists at all splices. The fabric wrapped gravel envelope should consist of 1/2- 3/4 inch minimum single size drain rock placed such that a minimum quantity of 0.7 cubic feet of aggregate exists per linear foot of pipe. All retaining walls are to be waterproofed (MiraDry or MiraClay recommended) down to a depth below the subdrain line. A secondary subdrain system consisting of MiraDrain is also recommended behind the retaining wall. To prevent the migration of

fine grain sediments into the gravel backfill, filter fabric should be placed along the back of the entire backcut for the retaining wall and lapped over the top.

17. Concrete

We recommend the use of Type V, sulfate-resistant cement. Concrete should be poured in accordance with Table 4.3.1 (Requirements for concrete exposed to sulfate-containing solutions) from ACI 318 (Building Code & Commentary). A water:cement ratio of 0.45 and concrete strength of 4500 psi concrete is recommended.

18. Surface/Site Drainage

All discharge of water shall be conducted offsite in a non-erosive manner, ensuring that no ponding of water occurs near new foundations or retaining walls for the new home. This is to be specified by the civil engineer or architect.

Per section 1804.4 of the 2016 CBC, the ground immediately adjacent to any foundation elements for the new residence shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet measured perpendicular to the face of the building wall. If physical obstructions or lot line prohibit 10 feet of horizontal distance, a 5-percent slope shall be provided to an approved alternate method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet of the building foundation. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building.

We anticipate that all water captured in roof and area drains will be delivered to the new approved solid pipe or to Pacific Coast Highway utilizing a dual sump-pump system (where unable to gravity drain). Likewise, all subsurface water captured in the subdrain system is to be delivered to approved outlets or to Pacific Coast Highway utilizing the aforementioned dual sump-pump system. The surface drainage plan is under the purview of the civil engineer of record.

19. Setback Distance

All of the proposed new construction is to be setback from the designated 'top of slope' (see Figs. 1-3). This will ensure that foundations penetrate downward into competent terrace sediment, penetrate a 1.5:1 (H:V) plane and are sufficiently setback from top of the slope.

Footings on or adjacent to slope surfaces shall be founded into competent earth material with an embedment and setback distance from the slope surface sufficient to provide vertical and lateral support for the footing without detrimental settlement. Footings or

caisson holes should be deepened so that the bottom outside face of the footing or caisson is a horizontal distance of H/3 (H= height of the slope) from daylight on the slope or structural setback plane, 40 foot maximum. Loose surficial soils, artificial fill, and other creep prone earth materials are not to be included in this setback distance. This office should be notified if the setback distance is changed. **The proposed foundation depths presented within this report satisfy the horizontal slope setback requirements (see Figs. 2 and 3).**

20. Planters and Slope Maintenance

Any plants located next to any structure should be planted in self-contained waterproof container. This will help prevent the migration of water underneath the slabs and footings. Slopes are to be properly maintained. Please see Appendix 3 for suggestions.

21. Spa and Pool Design

Any proposed spa/pool is to be supported on bedrock, terrace sediment or engineered fill, depending on the location. The pool/spa is not to be positioned above any transitional zone. Over excavation and re-compaction of sediment to provide a uniform un-yielding foundation bottom over the entire pool area is recommended. Alternatively, if placed near or on a slope, the entire pool and spa can be founded on a caisson-grade beam system that extends into competent terrace sediment or bedrock.

Cracking in pools or spas cannot be tolerated. Expansion in the on-site sediment and bedrock units is considered very low. However, during rainy months groundwater is expected to be within the terrace sediment and at fill-bedrock contact. This may create alternating wet and dry conditions against the pool/spa shell.

For soils having a low expansion potential, it is recommended that an equivalent lateral fluid pressure of 65 pcf be used for design of the pool/spa shell.

To avoid localized saturation of soils, landscaping of the backyard should be planned such that no planter boxes are located in the immediate vicinity of the spa shell or a moisture barrier should be provided for such plant containers.

Groundwater is not anticipated at the present time. However, as stated above, fluctuations in groundwater may occur in the future. The owner should consider installing a ground moisture pressure relief valves to help prevent damage to the spa due to ground water. Additional details presented in Appendix 4 should be taken into consideration for swimming pool or spa design.

22. Driveways

Private driveways and roads placed on low expansive soils are to have a minimum thickness of 5 inches. Pre-saturation of the subgrade may be required. This is to be verified by the soil engineer of record. As a minimum, no. 3 rebar 18 inches on center, is recommended for reinforcement. Thickened edges should be a minimum of 8" by 8". A maximum joint spacing of 10 feet is recommended with an aggregate base of 2 inches as a minimum. Governing agencies may dictate the road pavement requirement.

23. Pre-Construction Meeting

A pre-construction meeting/conference should be held with representatives of the City of Laguna Beach, owner, contractor, engineering geologist, and soils/civil engineer prior to commencement of construction to establish an appropriate construction sequence.

24. Observation and Testing

As a condition for use of this report, it is required that geotechnical construction observations be conducted by Borella Geology, Inc. (BGI) to assure proper removal of unsuitable materials, that foundation excavations (shallow and deepened) are clean and founded in competent earth material, to assist the contractor in obtaining proper moisture content and proper degree of compaction of fill, to select and appropriately place wall and trench backfill materials, and to confirm design assumptions.

A BGI representative shall visit the site at intervals appropriate to the stage of construction, as notified by the Contractor, in order to observe the progress and quality of work completed by the Contractor. Such visits and observations are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow BGI, as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the recommendations of this report.

BGI shall not supervise, direct, or have control over the Contractor's work nor have any responsibility for the construction means, methods, techniques, sequences, or procedures selected by the Contractor nor the Contractor's safety precautions or programs in connection with the work. These rights and responsibilities are solely those of the Contractor.

BGI shall not be responsible for any acts or omission of the Contractor, subcontractor, any entity performing any portion of work, or any agents or employees of any of them. BGI does not guarantee the performance of the Contractor and shall not be responsible for

the Contractor's failure to perform his/her work in accordance with the Contractor documents or any applicable laws, codes, rules, or regulations.

Site observations are beyond the scope of this investigation and budget and are conducted on a time and materials basis. The responsibility for timely notification of the start of construction and on-going geotechnically involved phases of construction is that of the owner and his/her contractor. Typically, a notice of at least 24 hours is required. Borella Geology Inc. should perform geotechnical observation and/or testing at the following times during the development.

1. During grading (e.g. removal bottoms, fill placement)
2. Before any steel or concrete is placed in continuous footing excavations, square pad footings, caissons, slabs on grade, etc.
3. During installation of temporary shoring and lagging
4. During wall and utility trench backfill and compaction
5. Preparation of pavement subgrade and placement of aggregate base.
6. If any unusual or unforeseen soil conditions are encountered during any construction operation subsequent to issuance of this report.
7. Continual or full time monitoring and inspections of caisson borings and deepened foundations per section 1705.8, CBC 2016.

25. Jobsite Safety

Neither the professional activities of BGI nor the presence of BGI's employees and subconsultants at a construction/project site shall relieve the General Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the work in accordance with the contract documents and health or safety precautions required by any regulatory agencies. BGI and its personnel have no authority to exercise any control over any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The General Contractor shall be solely responsible for jobsite safety.

26. Review of Final Plans

After review of this paper by the designated civil engineer and/or structural engineer, architect, etc., we would like to review the final plans for development and construction. We would like to do this to ensure that these plans are in conformance with the known geotechnical site conditions prior to submission to regulatory or governing agencies. **A pre-grade meeting between all concerned parties is mandatory.**

Limitations

This investigation has been conducted in accordance with the generally accepted practice in the engineering geology field. No further warranty is offered or implied. The conclusions and recommendations presented are based on surface, limited subsurface data, floor level conditions and our present state of geologic knowledge. They are not meant to imply a control of nature. As site geotechnical conditions may alter with time, the recommendations presented in this report are considered valid for a time period of one year from the report date. Any errors or omission noted by any agency or person reviewing this report and/or any other geotechnical aspects of the project should be reported to this office in a timely fashion. Changes in proposed land use or development may require supplemental investigations or recommendations. Lastly, independent use of this report in any form cannot be approved unless specific, written verification of the applicability of the recommendations is obtained from this office.

This office does not practice or consult in the field of safety engineering. We do not direct the contractor's operations. We are only responsible for the safety of our personnel on the site. The safety of others is the responsibility of the contractor. The contractor should notify the owner if he considers any of the recommended actions presented in this report to be unsafe.

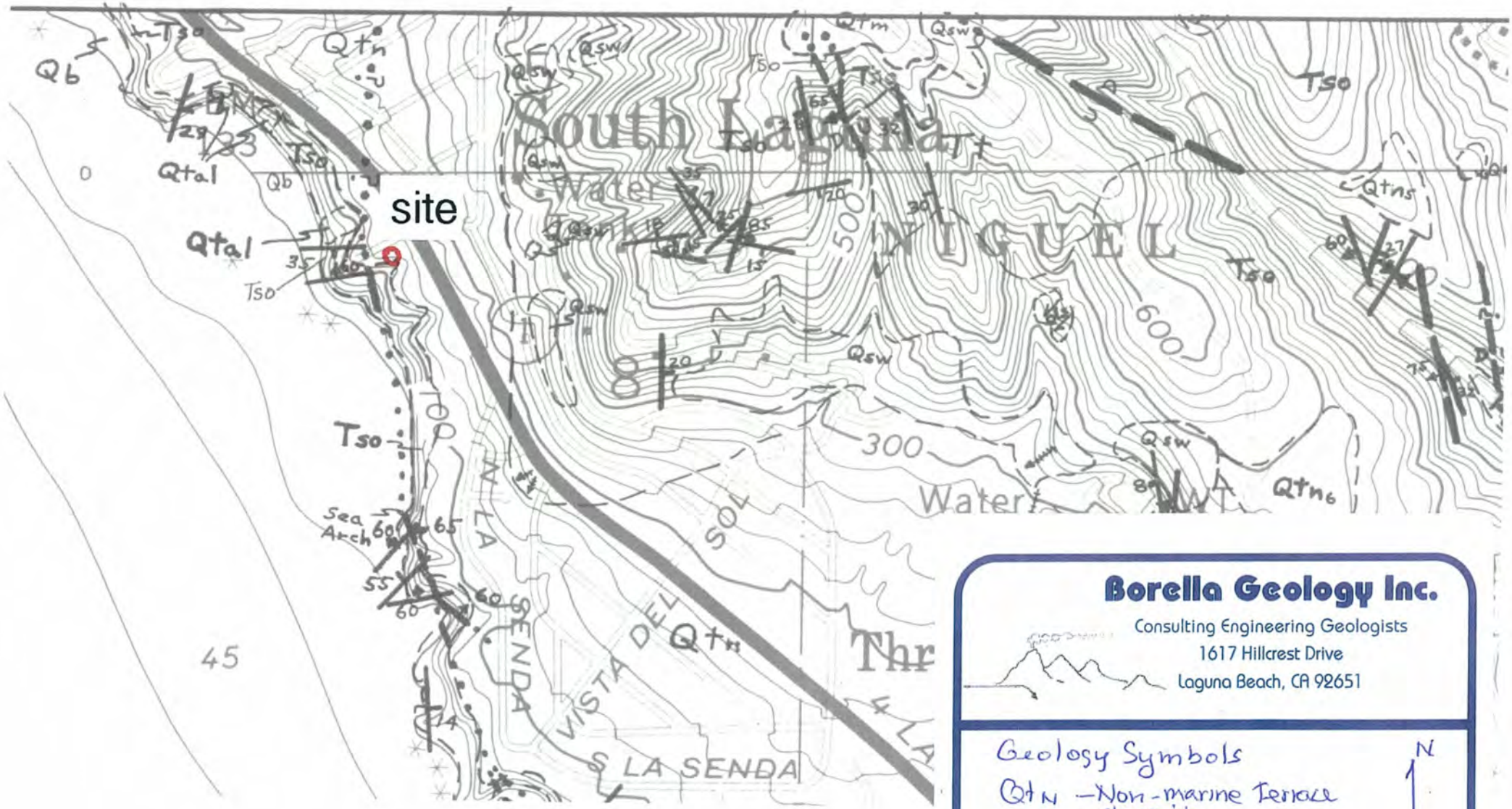
Figure 1: Site Topographic Map with Geology and Ocean Bluff Top determination (in Pocket)

Figure 1A: Ocean Bluff Top and slope determinations, RDM surveying Inc (in pocket)
Figure 1B: Ocean Bluff Top and slope determinations (city of Laguna Beach GIS map) (in pocket

Figure 2: Cross-Section A-A' with Geology (in Pocket)

Figure 3: Cross-Section B-B' with Geology (in pocket)

Figure 4a, b: Regional Geologic Map (Edgington, 1974; Tan et al., 2004)



Borella Geology Inc.

Consulting Engineering Geologists
1617 Hillcrest Drive
Laguna Beach, CA 92651

Geology Symbols

Qtn – Non-marine Terrace deposit

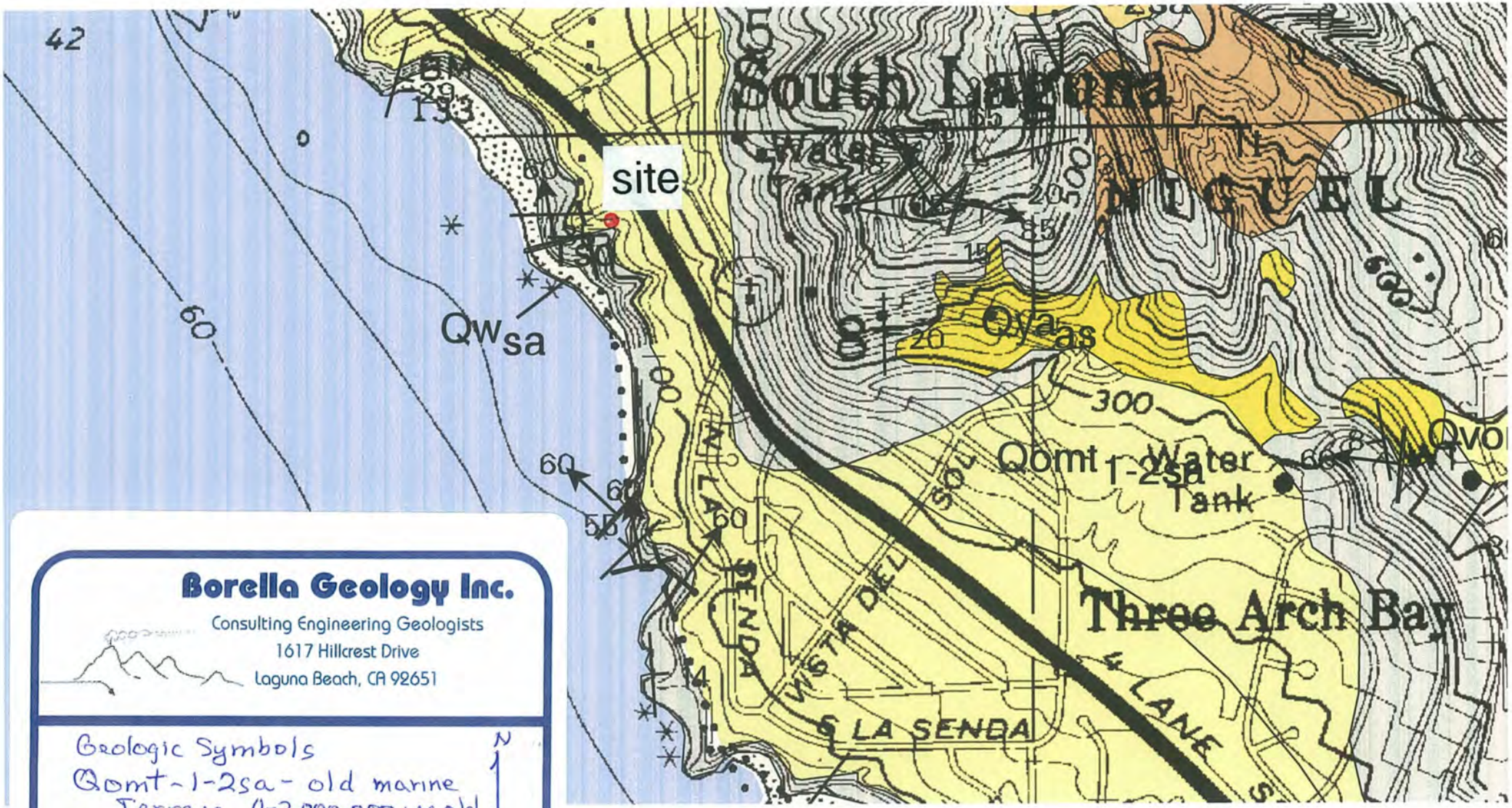
Tso – San Onofre Breccia

– 35° STRIKE & DIP OF BEDDING

~ INACTIVE FAULT

EDGINGTON 1974.

N



Borella Geology Inc.

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1617 Hillcrest Drive
Laguna Beach, CA 92651

Geologic Symbols

Qomt-1-2sa - old marine Terrace (1-2,000,000 yrs old. (SAME AS QtN)

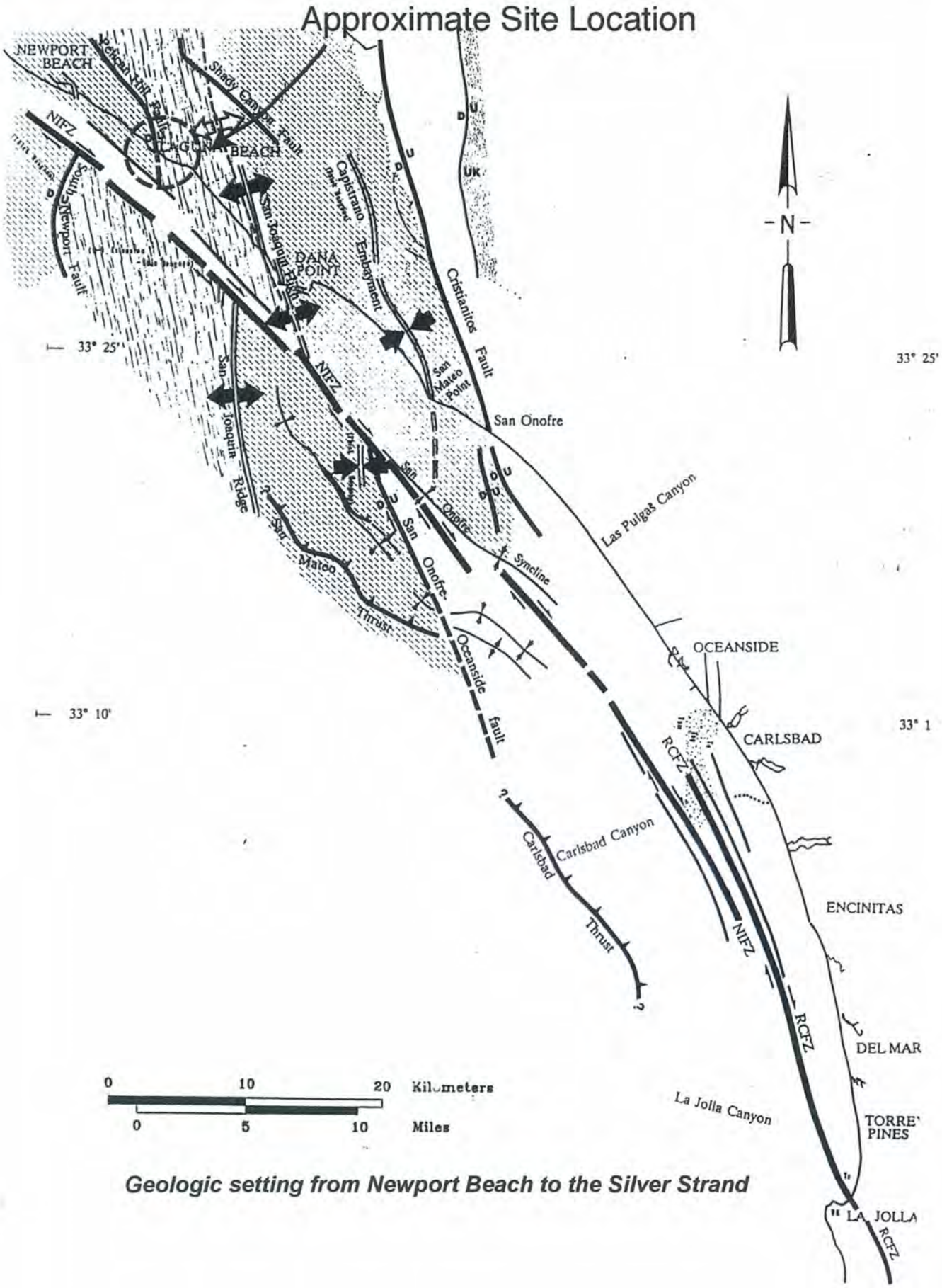
Tso - SAN Onofre Breccia

INACTIVE FAULT

N

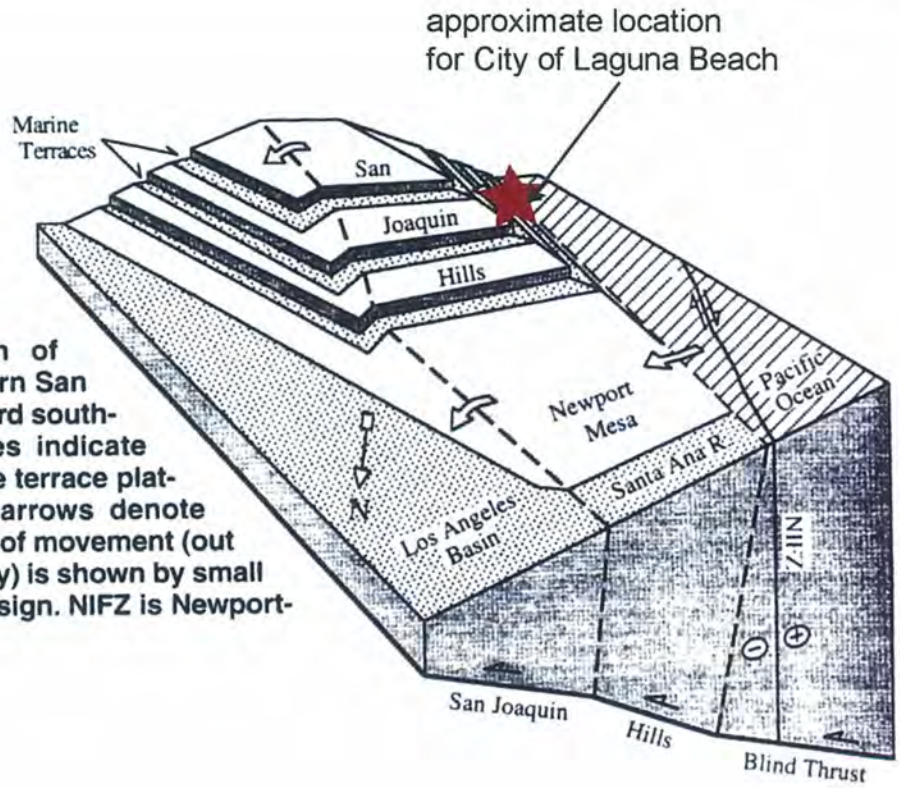
TAN ET. AL. 2004

Figure 5: Portion of Active Fault Near-Source Zones Map Showing Newport-Inglewood Fault



Geologic setting from Newport Beach to the Silver Strand

Figure 6: Block Diagram Showing Hypothetical Relationship Between the Newport Inglewood Fault Zone and the San Joaquin Blind Thrust Fault (Grant et al., 1999)



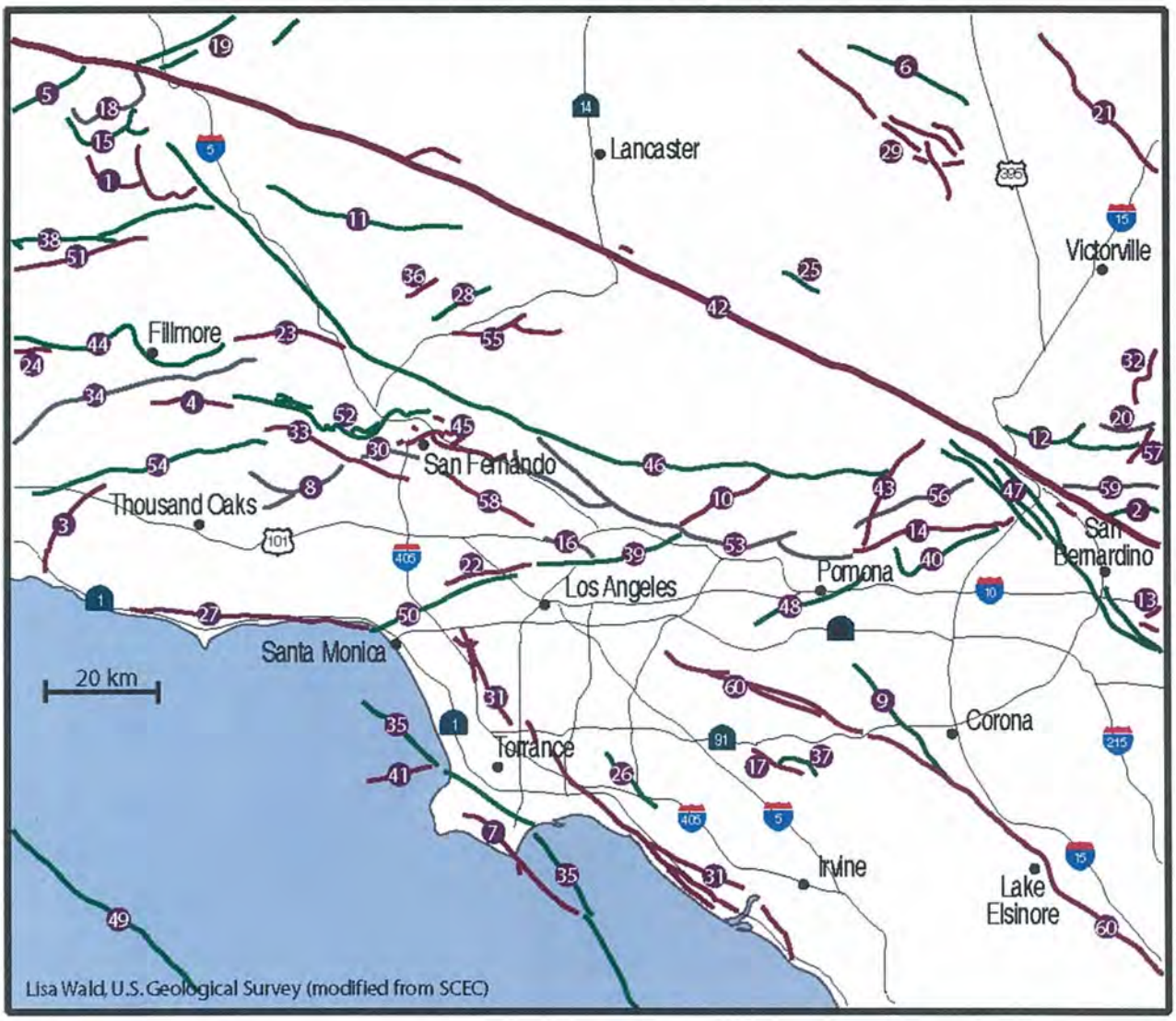
4. Block diagram of marine-terraces on northern San Joaquin Hills (viewed toward southwest). Heavy dashed lines indicate active axial surfaces where terrace platforms are folded. Large arrows denote sense of folding. Direction of movement (out of or into page, respectively) is shown by small arrows and plus or minus sign. NIFZ is Newport-Inglewood fault zone.

33

Block Diagram Showing Hypothetical Relationship Between the Newport Inglewood Fault Zone and the San Joaquin Blind Thrust Fault (Grant et al., 1999); approximate location for City of Laguna Beach depicted.

Figure 7a, b: Major Faults for Los Angeles Area and Seismic Activity for Southern California since 1932

Faults of the Los Angeles Area



1 Alamo thrust
2 Arrowhead fault
3 Bailey fault
4 Big Mountain fault
5 Big Pine fault
6 Blake Ranch fault
7 Cabrillo fault
8 Chatsworth fault
9 Chino fault
10 Clamshell-Sawpit fault
11 Clearwater fault
12 Cleghorn fault
13 Crafton Hills fault zone
14 Cucamonga fault zone
15 Dry Creek
16 Eagle Rock fault
17 El Modeno
18 Frazier Mountain thrust
19 Garlock fault zone
20 Grass Valley fault
21 Helendale fault
22 Hollywood fault
23 Holser fault
24 Lion Canyon fault
25 Llano fault
26 Los Alamitos fault
27 Malibu Coast fault
28 Mint Canyon fault
29 Mirage Valley fault zone
30 Mission Hills fault
31 Newport Inglewood fault zone
32 North Frontal fault zone
33 Northridge Hills fault
34 Oak Ridge fault
35 Palos Verdes fault zone
36 Pelona fault
37 Peralta Hills fault
38 Pine Mountain fault
39 Raymond fault
40 Red Hill (Etiwanda Ave) fault
41 Redondo Canyon fault
42 San Andreas Fault
43 San Antonio fault
44 San Cayetano fault
45 San Fernando fault zone
46 San Gabriel fault zone
47 San Jacinto fault
48 San Jose fault
49 Santa Cruz-Santa Catalina Ridge f.z.
50 Santa Monica fault
51 Santa Ynez fault
52 Santa Susana fault zone
53 Sierra Madre fault zone
54 Simi fault
55 Soledad Canyon fault
56 Stoddard Canyon fault
57 Tunnel Ridge fault
58 Verdugo fault
59 Waterman Canyon fault
60 Whittier fault

Southern California Seismic Activity Since 1932

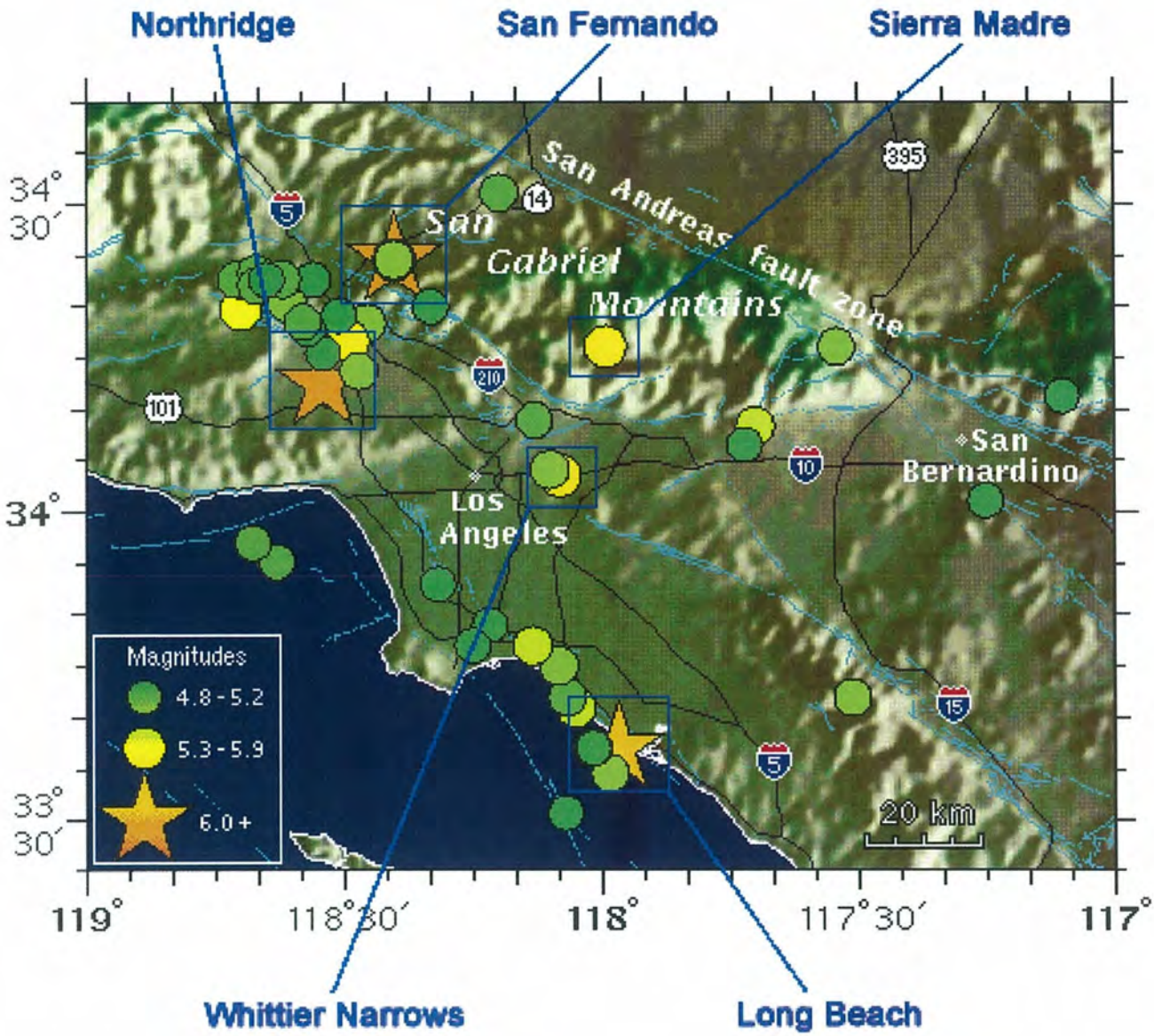
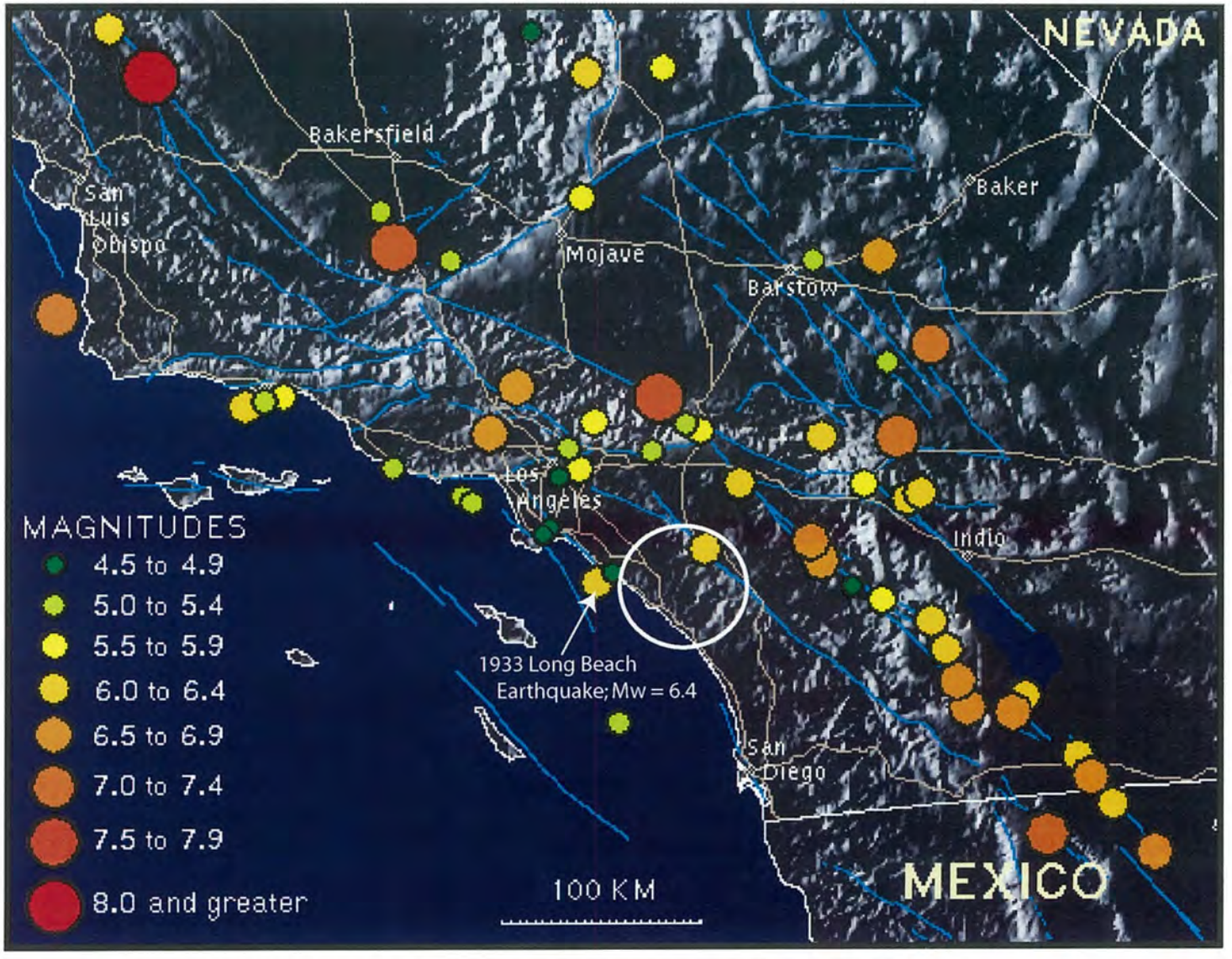


Figure 8a, b: Significant Earthquakes of California (1812-1999) and October 25, 2019

Southern California Earthquakes



Map shows epicenters of historic earthquakes (as far back as 1812). Map does not show the epicenters of all earthquakes greater than magnitude 4.5 recorded in southern California area since the 19th century. Magnitudes given by the scale are generally moment magnitudes. Laguna Beach is located within the white circle. Location of 1933 Long Beach Earthquake also labeled.

recent earthquakes in California and Nevada

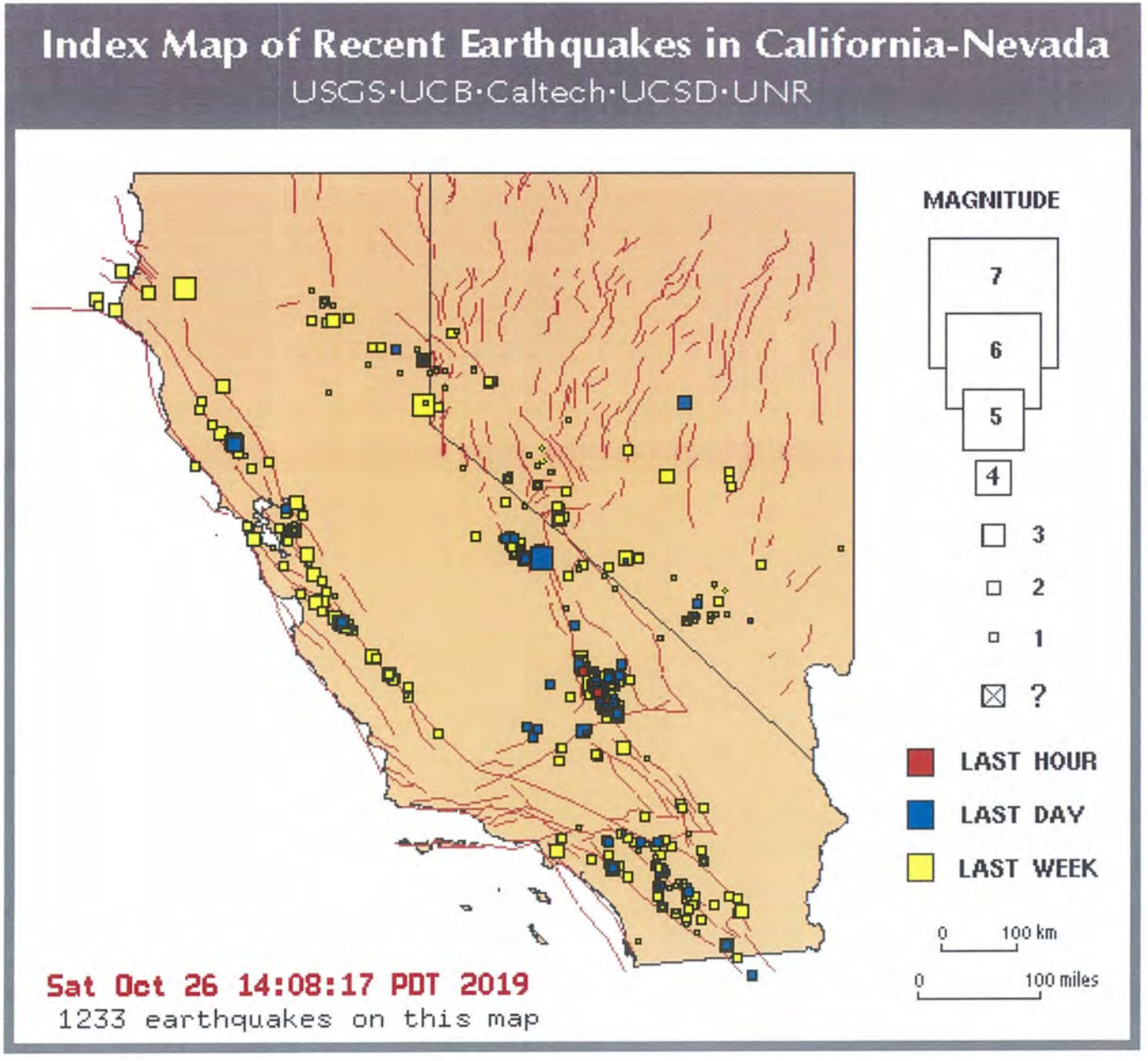


Figure 9: Liquefaction and Earthquake-Induced landslide Map for Dana Point Quadrangle (2001)

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1617 Hillcrest Drive
Laguna Beach, CA 92651

Potential earthquake induced landslide shown BLUE

Potential LIQUEFACTION ZONE SHOWN IN GREEN

DANA POINT QUADRANGLE 2001

Appendix 1: Subsurface Trench and Auger Boring Logs

Exploration Trench Log

Job: 32051 South Coast Hwy
Trench Number: 1
Date: 7/23/2019

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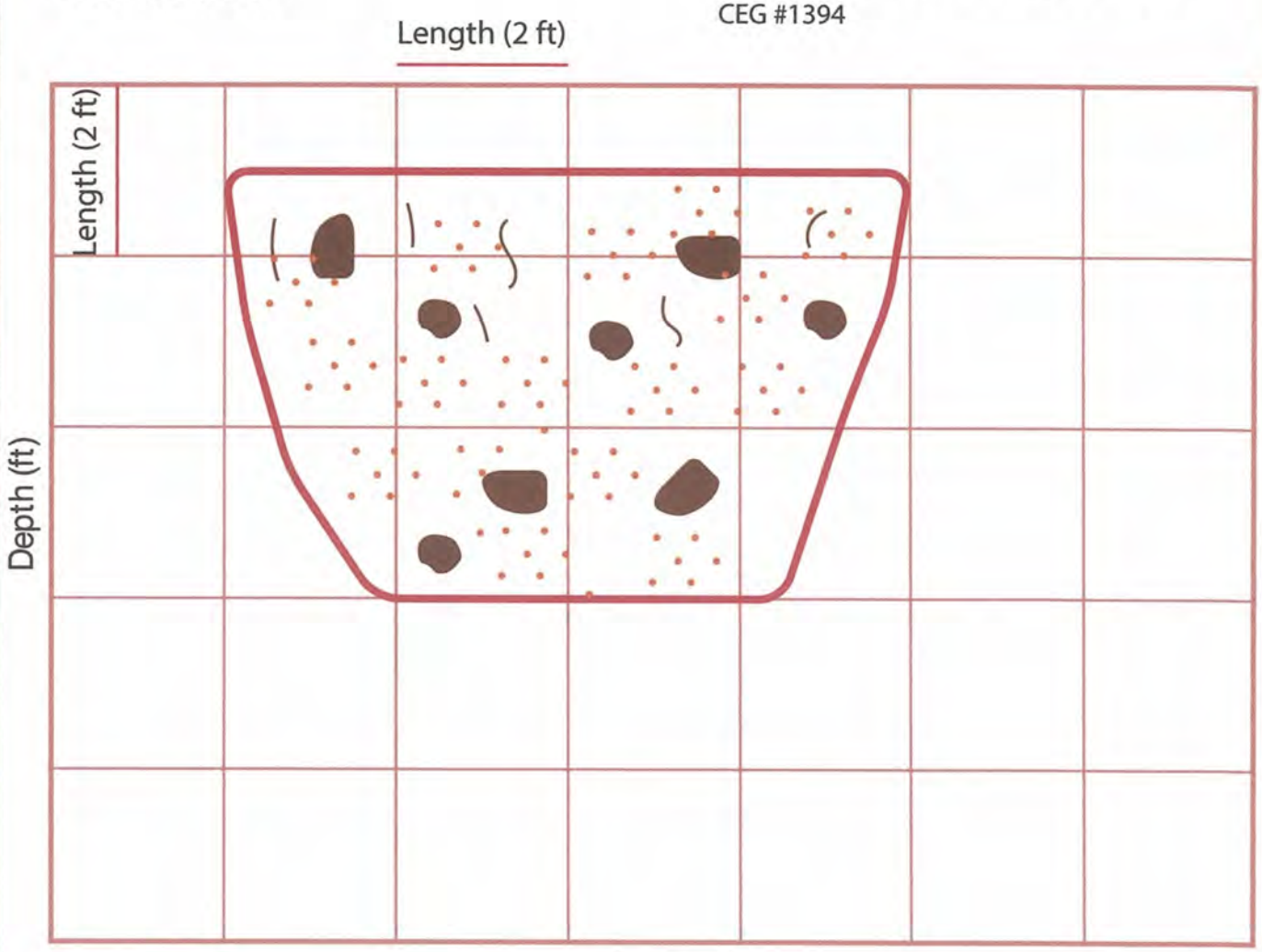
CEG #1394



T-1

Description

Trench #1: 4'x 8'x 6' deep (Back hoe excavation)

0-6': Quaternary Terrace Deposits (non-marine)

Extremely hard clasts (cobbles and pebbles) mixed with matrix of red brown silty sand. Rootlets to 3'. No water/open seeps.

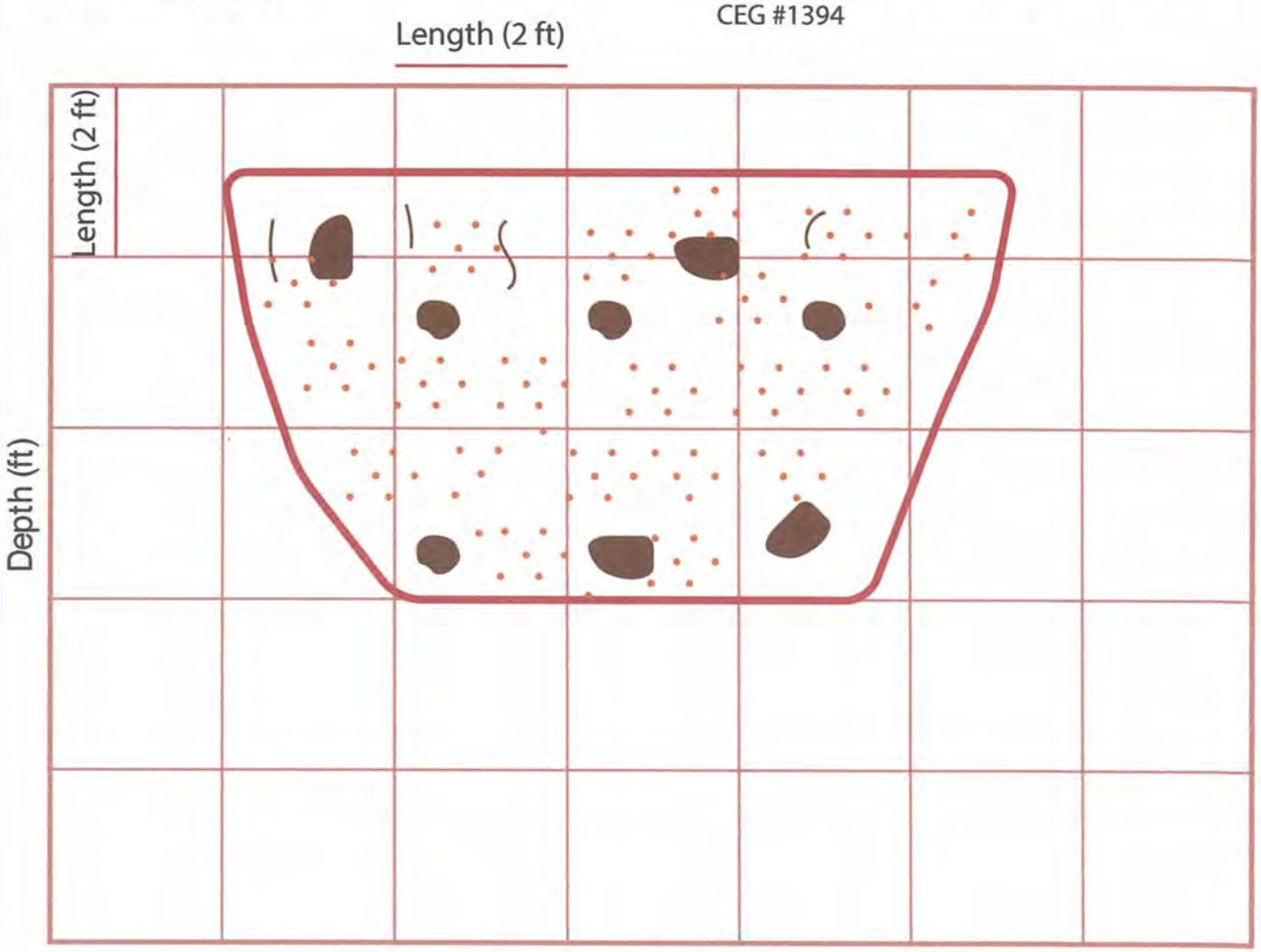
CSP taken at 4'

40 blows for first 5.5"
40 blows for 2.5"
40 blows for 2"

Exploration Trench Log

Job: 32051 South Coast Hwy
Trench Number: 2
Date: 7/23/2019

Borella Geology Inc
Consulting Engineering Geologists
CEG #1394



T-2

Description

Trench #2: 4'x 7'6"x 7'6" deep (Back hoe Excavation)

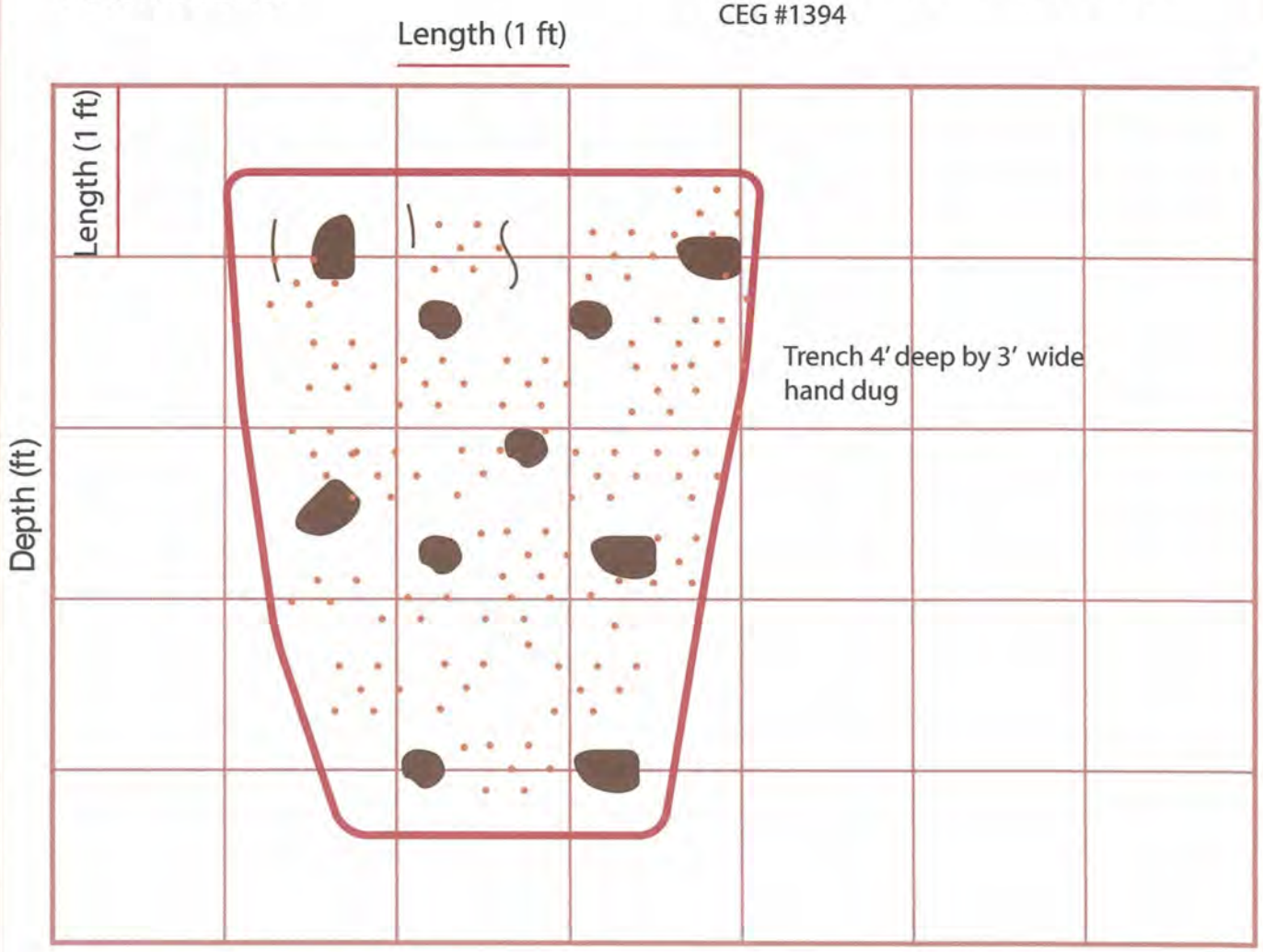
0-7'6": Quaternary Terrace Deposits (non-marine)

0-3': Rocky clasts (cobbles and pebbles) in a red-brown silty sand matrix. Extremely hard.
3-6': Less rocks than 0-3'. Reb-brown silty sand. Same matrix. Still extreamly hard
6-7'6": Rocky clasts (coblles and pebbles) in a red-brown silty sand matrix. Extremely hard.

Exploration Trench Log

Job: 32051 South Coast Hwy
Trench Number: 3
Date: 7/23/2019

Borella Geology Inc
Consulting Engineering Geologists
CEG #1394



T-3

Description

Trench #3: 3'x 3'x 4' deep (Hand Dug)

0-4': Quaternary Terrace Deposits (non-marine)

0-4'': Rocky clasts (boulders, cobbles and pebbles) in a red-brown silty sand matrix. Extreamly hard. Upper foot contains roots.

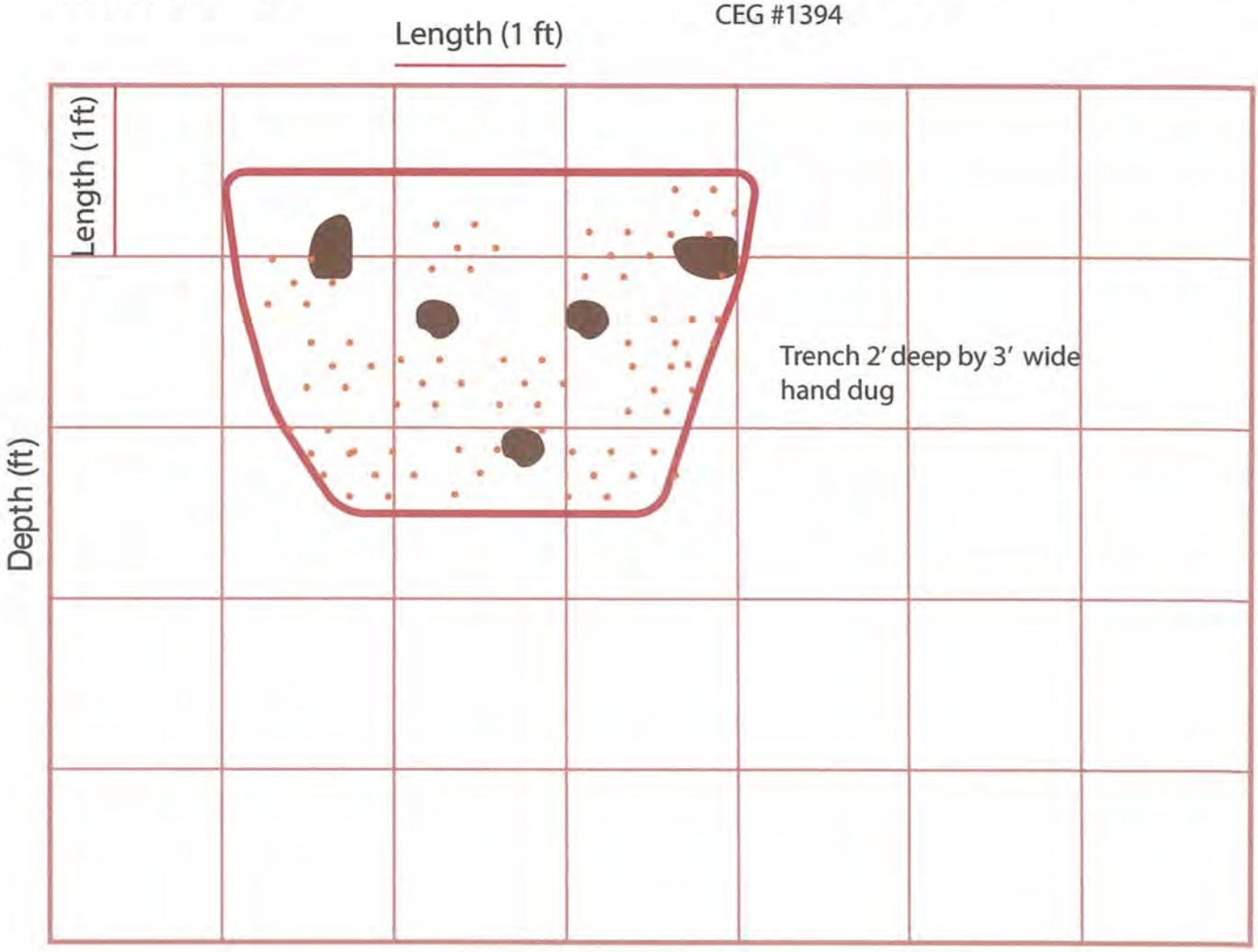
Trench located at top of headscarp of surficial slump. Verticle cut (2')of headscard shows same Qtn deposits (boulders, cobbles and pebbles derived from TSO) in a red-brown silty sand matrix.

Where headscarp is close to deck and small wall, settlement noted

Exploration Trench Log

Job: 32051 South Coast Hwy
Trench Number: 4
Date: 7/23/2019

Borella Geology Inc
Consulting Engineering Geologists
CEG #1394



T-4

Description

Trench #4 : 3'x 3'x 2' deep (Hand Dug)

***Trench dug under deck

0-2': Quaternary Terrace Deposits (non-marine)

0-2": Rocky clasts (boulders, cobbles and pebbles) in a red-brown silty sand matrix. Extremely hard.

Appendix 2: Soil analyses and Stability Analyses

LABORATORY TESTING

PROJECT: **Lee**
32051 South Coast Highway
Laguna Beach

Project No. 19-4045

DATE: **08/05/19**

A. Moisture - Density Determination

Dry unit weights and field moisture contents were determined for core specimens obtained from the test specimens by measuring the volume and weight of the specimens. Moisture determinations were made in accordance with ASTM test methods. The results are summarized below:

Sample Location	Material Type	Moisture Content %	Dry Density PCF
T1 @ 6'	Reddish brown silty sand with white gravel particles	86.9	105.2

B. Maximum Density-Optimum Moisture Determination

Maximum density and optimum moisture content were determined in accordance with Test Designation ASTM D 1557-07. The test results are summarized below.

Sample Location	Material Type	Optimum Moisture %	Max. Dry Density PCF
T1 @ 4'	Reddish brown silty sand	8.0	129.0

C. Expansion Index

Expansion Index tests were performed in accordance with Uniform Building Code Standard 29-2. The test results are summarized below.

Sample Location	Material Type	Expansion	Classification
T1 @ 4'	Reddish brown silty sand	9	Very Low

D. Sulfate Ion

Sulfate ion content tests were performed in accordance with California Test Method 417 at Anaheim Testing Laboratory. Sulfate exposure classifications are in accordance with Table 4.2.1 of ACI 318-08. The test results are summarized below.

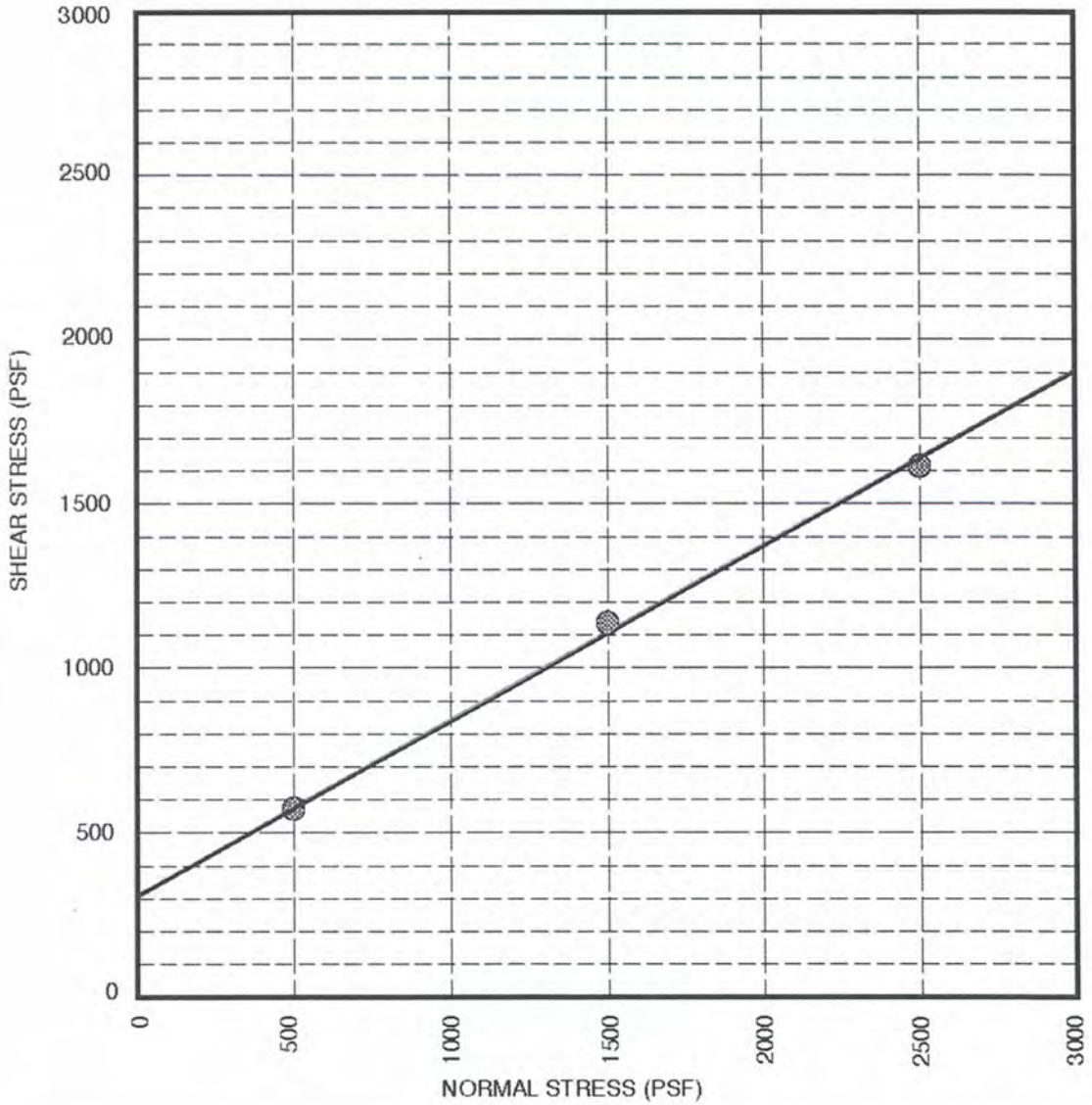
Sample Location	Description	Soluble Sulfate in Soil Percent by Weight	Class
T1 @ 4'	Reddish brown silty sand	.0051	S0 Negligible

E. Direct Shear Test

One Direct Shear Test was performed on typical on-site materials in accordance with ASTM D 3080 methods. The results are shown on the attached Drawing "SHEAR CHART".

PROJECT :	Lee, 32051 S Coast Hwy	MATERIAL:	NORMAL (psf)	-	SHEAR (psf)
LOCATION:	T1	Reddish brown silty sand	500	-	587
DEPTH:	6'		1500	-	1135
DATE:	7-29-19		2500	-	1610

Ø = 29° **c =** 310 psf

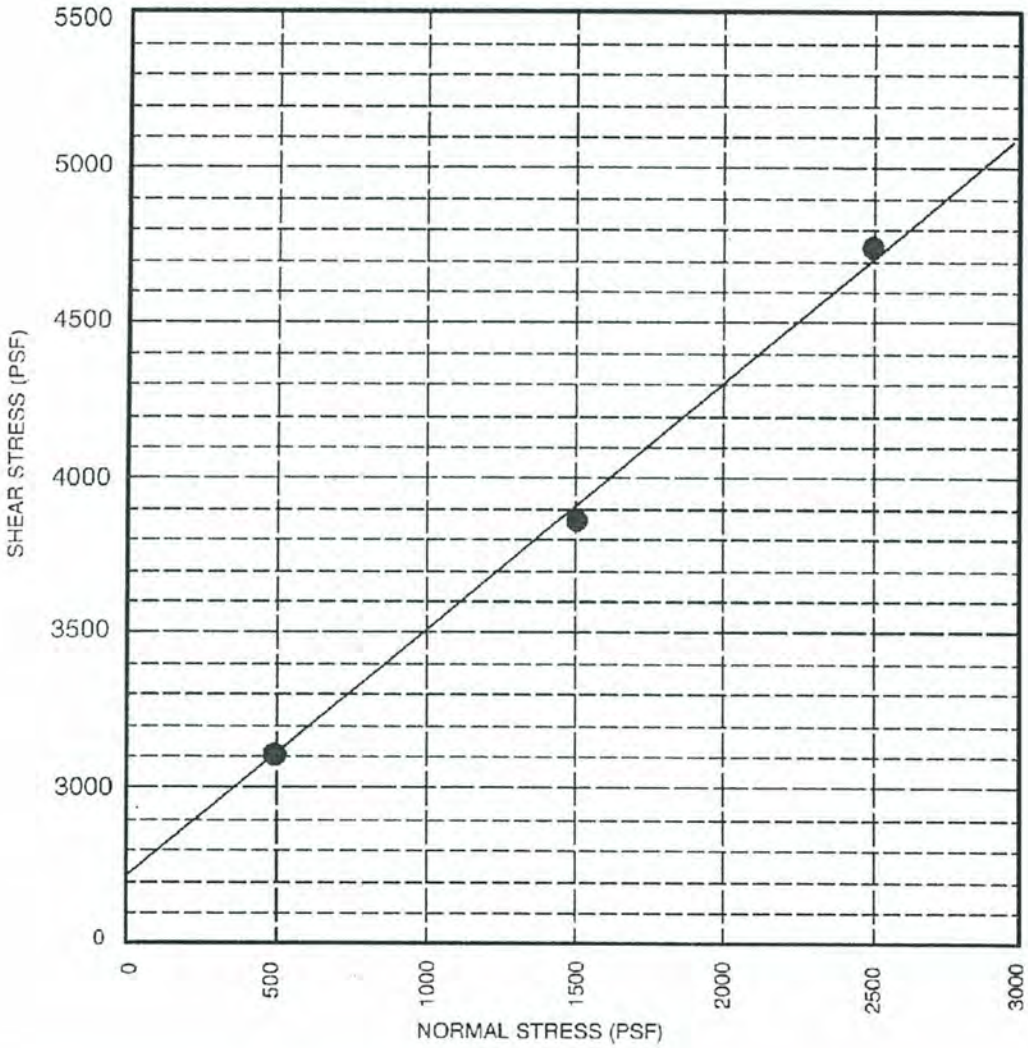


SHEAR CHART

PROJECT :	Forman	MATERIAL:	NORMAL (psf) -	SHEAR (psf)
LOCATION:	As provided	Gray sandstone	500 -	3108
DEPTH:			1500 -	3875
DATE:	01/21/16		2500 -	4761

Ø = 40° **c =** 2700 psf

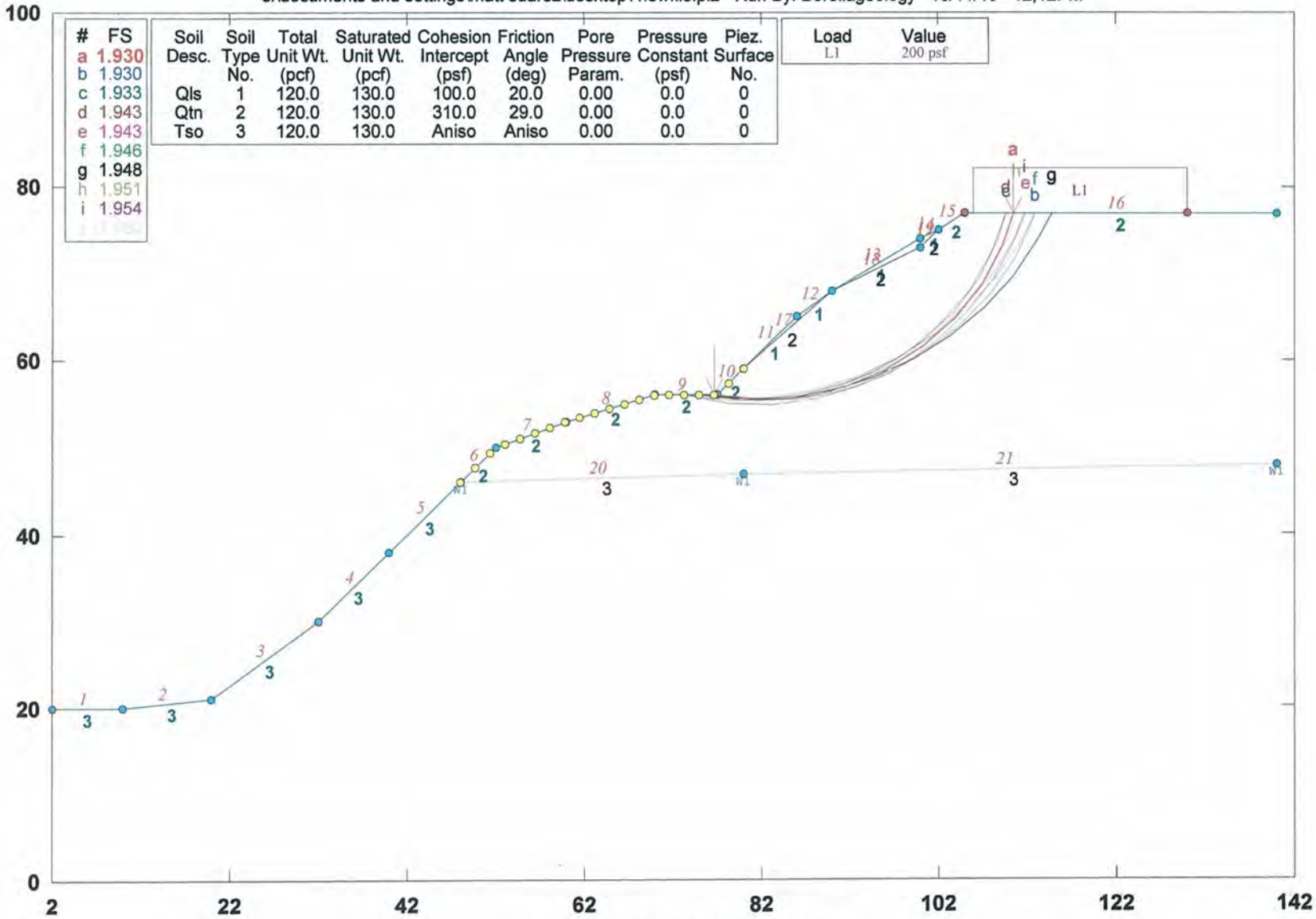
Sample carved from bulk specimen



SHEAR CHART

Chuck Le 32051 Coast Hwy, Laguna Beach, Profile B-B' static stability

c:\documents and settings\matt suarez\desktop\-newfile.pl2 Run By: Borellageology 10/11/19 12;12PM



GSTABL7 v.2 FSmin=1.930

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

***** GSTABL7 *****

** GSTABL7 by Garry H. Gregory, P.E. **

** Original Version 1.0, January 1996; Current Version 2.004, June 2003 **

****

SLOPE STABILITY ANALYSIS SYSTEM

Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 10/11/19
Time of Run: 12;12PM
Run By: Borellageology
Input Data Filename: C:\Documents and Settings\Matt Suarez\Desktop\-NewFile.in
Output Filename: C:\Documents and Settings\Matt Suarez\Desktop\-NewFile.OUT
Unit System: English
Plotted Output Filename: C:\Documents and Settings\Matt Suarez\Desktop\-NewFile.PLT
PROBLEM DESCRIPTION: Chuck Le 32051 Coast Hwy, Laguna Beach,
Profile B-B' static stability

BOUNDARY COORDINATES

Note: User origin value specified.

Add 2.00 to X-values and 0.00 to Y-values listed.

16 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	2.00	20.00	10.00	20.00	3
2	10.00	20.00	20.00	21.00	3
3	20.00	21.00	32.00	30.00	3
4	32.00	30.00	40.00	38.00	3
5	40.00	38.00	48.00	46.00	3
6	48.00	46.00	52.00	50.00	2
7	52.00	50.00	60.00	53.00	2
8	60.00	53.00	70.00	56.00	2
9	70.00	56.00	77.00	56.00	2
10	77.00	56.00	80.00	59.00	2
11	80.00	59.00	86.00	65.00	1
12	86.00	65.00	90.00	68.00	1
13	90.00	68.00	100.00	74.00	1
14	100.00	74.00	102.00	75.00	1
15	102.00	75.00	105.00	77.00	2
16	105.00	77.00	140.00	77.00	2
17	80.00	59.00	90.00	68.00	2
18	90.00	68.00	100.00	73.00	2
19	100.00	73.00	102.00	75.00	2
20	48.00	46.00	80.00	47.00	3
21	80.00	47.00	140.00	48.00	3

Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	130.0	100.0	20.0	0.00	0.0	0
2	120.0	130.0	310.0	29.0	0.00	0.0	0
3	120.0	130.0	2700.0	40.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)
Soil Type 3 Is Anisotropic
Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	32.0	2700.00	40.00
2	36.0	1000.00	30.00
3	90.0	2700.00	40.00

ANISOTROPIC SOIL NOTES:
(1) An input value of 0.01 for C and/or Phi will cause Aniso C and/or Phi to be ignored in that range.
(2) An input value of 0.02 for Phi will set both Phi and C equal to zero, with no water weight in the tension crack.
(3) An input value of 0.03 for Phi will set both Phi and C equal to zero, with water weight in the tension crack.

1 PIEZOMETRIC SURFACE(S) SPECIFIED
Unit Weight of Water = 62.40 (pcf)
Piezometric Surface No. 1 Specified by 3 Coordinate Points
Pore Pressure Inclination Factor = 0.50

Point No.	X-Water (ft)	Y-Water (ft)
1	48.00	46.00
2	80.00	47.00
3	140.00	48.00

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (psf)	Deflection (deg)
1	106.00	130.00	200.0	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed
Force Acting On A Horizontally Projected Surface.
Specified Peak Ground Acceleration Coefficient (A) = 0.650(g)
Specified Horizontal Earthquake Coefficient (kh) = 0.150(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
Specified Seismic Pore-Pressure Factor = 0.000
EARTHQUAKE DATA HAS BEEN SUPPRESSED
A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
Janbus Empirical Coef. is being used for the case of c & phi both > 0
2000 Trial Surfaces Have Been Generated.
100 Surface(s) Initiate(s) From Each Of 20 Points Equally Spaced
Along The Ground Surface Between X = 48.00(ft)
and X = 80.00(ft)
Each Surface Terminates Between X = 105.00(ft)
and X = 130.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)
5.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Evaluated. They Are
Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Simplified Janbu Method * *
Total Number of Trial Surfaces Attempted = 2000
Number of Trial Surfaces With Valid FS = 2000
Statistical Data On All Valid FS Values:
FS Max = 5.910 FS Min = 1.930 FS Ave = 3.354
Standard Deviation = 1.218 Coefficient of Variation = 36.31 %
Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.601	55.446
3	86.592	55.745
4	91.459	56.889
5	96.061	58.845
6	100.262	61.556
7	103.942	64.941
8	106.991	68.904
9	109.322	73.327
10	110.515	77.000

Factor of Safety
*** 1.930 ***
Individual data on the 17 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	0.4	0.9	0.0	0.0	0.	0.	0.0	0.0	0.0
2	3.0	615.0	0.0	0.0	0.	0.	0.0	0.0	0.0
3	1.6	819.4	0.0	0.0	0.	0.	0.0	0.0	0.0
4	4.4	3812.9	0.0	0.0	0.	0.	0.0	0.0	0.0
5	0.6	674.3	0.0	0.0	0.	0.	0.0	0.0	0.0
6	3.4	4325.4	0.0	0.0	0.	0.	0.0	0.0	0.0
7	1.5	2052.1	0.0	0.0	0.	0.	0.0	0.0	0.0
8	4.6	6840.9	0.0	0.0	0.	0.	0.0	0.0	0.0
9	3.9	6004.6	0.0	0.0	0.	0.	0.0	0.0	0.0
10	0.3	396.7	0.0	0.0	0.	0.	0.0	0.0	0.0
11	1.7	2546.0	0.0	0.0	0.	0.	0.0	0.0	0.0
12	1.9	2702.8	0.0	0.0	0.	0.	0.0	0.0	0.0
13	1.1	1399.2	0.0	0.0	0.	0.	0.0	0.0	0.0
14	1.0	1204.1	0.0	0.0	0.	0.	0.0	0.0	0.0
15	1.0	1039.7	0.0	0.0	0.	0.	0.0	0.0	198.3

16	2.3	1646.0	0.0	0.0	0.	0.	0.0	0.0	466.2
17	1.2	262.8	0.0	0.0	0.	0.	0.0	0.0	238.5

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.598	55.423
3	86.594	55.631
4	91.495	56.619
5	96.181	58.364
6	100.536	60.821
7	104.451	63.930
8	107.832	67.614
9	110.593	71.783
10	112.666	76.332
11	112.851	77.000

Factor of Safety
*** 1.930 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.610	55.537
3	86.594	55.936
4	91.436	57.185
5	95.991	59.248
6	100.124	62.061
7	103.712	65.543
8	106.650	69.589
9	108.848	74.080
10	109.697	77.000

Factor of Safety
*** 1.933 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	74.947	56.000
2	79.904	55.341
3	84.900	55.530
4	89.792	56.562
5	94.440	58.408
6	98.707	61.013
7	102.473	64.302
8	105.627	68.182
9	108.079	72.539
10	109.670	77.000

Factor of Safety
*** 1.943 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.231	55.432
3	83.229	55.577
4	88.155	56.433
5	92.909	57.983
6	97.393	60.194
7	101.517	63.021
8	105.195	66.408
9	108.354	70.284
10	110.927	74.571
11	111.948	77.000

Factor of Safety
*** 1.943 ***

Failure Surface Specified By 11 Coordinate Points

Point	X-Surf	Y-Surf

No.	(ft)	(ft)
1	73.263	56.000
2	78.239	55.512
3	83.236	55.698
4	88.162	56.555
5	92.928	58.067
6	97.447	60.206
7	101.638	62.934
8	105.423	66.201
9	108.734	69.947
10	111.511	74.105
11	112.924	77.000

Factor of Safety
*** 1.946 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	74.947	56.000
2	79.920	55.474
3	84.917	55.625
4	89.848	56.453
5	94.622	57.941
6	99.150	60.061
7	103.349	62.776
8	107.141	66.034
9	110.458	69.776
10	113.237	73.933
11	114.731	77.000

Factor of Safety
*** 1.948 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.192	55.157
3	83.191	55.107
4	88.136	55.851
5	92.899	57.370
6	97.362	59.626
7	101.409	62.561
8	104.940	66.102
9	107.864	70.158
10	110.108	74.626
11	110.857	77.000

Factor of Safety
*** 1.951 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.171	55.042
3	83.168	54.873
4	88.129	55.497
5	92.928	56.898
6	97.446	59.041
7	101.568	61.871
8	105.189	65.319
9	108.220	69.296
10	110.583	73.702
11	111.725	77.000

Factor of Safety
*** 1.954 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	74.947	56.000

```
 2          79.865       55.098
 3          84.865       55.080
 4          89.790       55.945
 5          94.484       57.666
 6          98.801       60.190
 7         102.603       63.437
 8         105.773       67.304
 9         108.209       71.670
10         109.836       76.398
11         109.929       77.000
    Factor of Safety
   ***    1.960   ***
       **** END OF GSTABL7 OUTPUT ****
```

Chuck Le 32051 Coast Hwy, Laguna Beach, Profile B-B' pseudostatic stability

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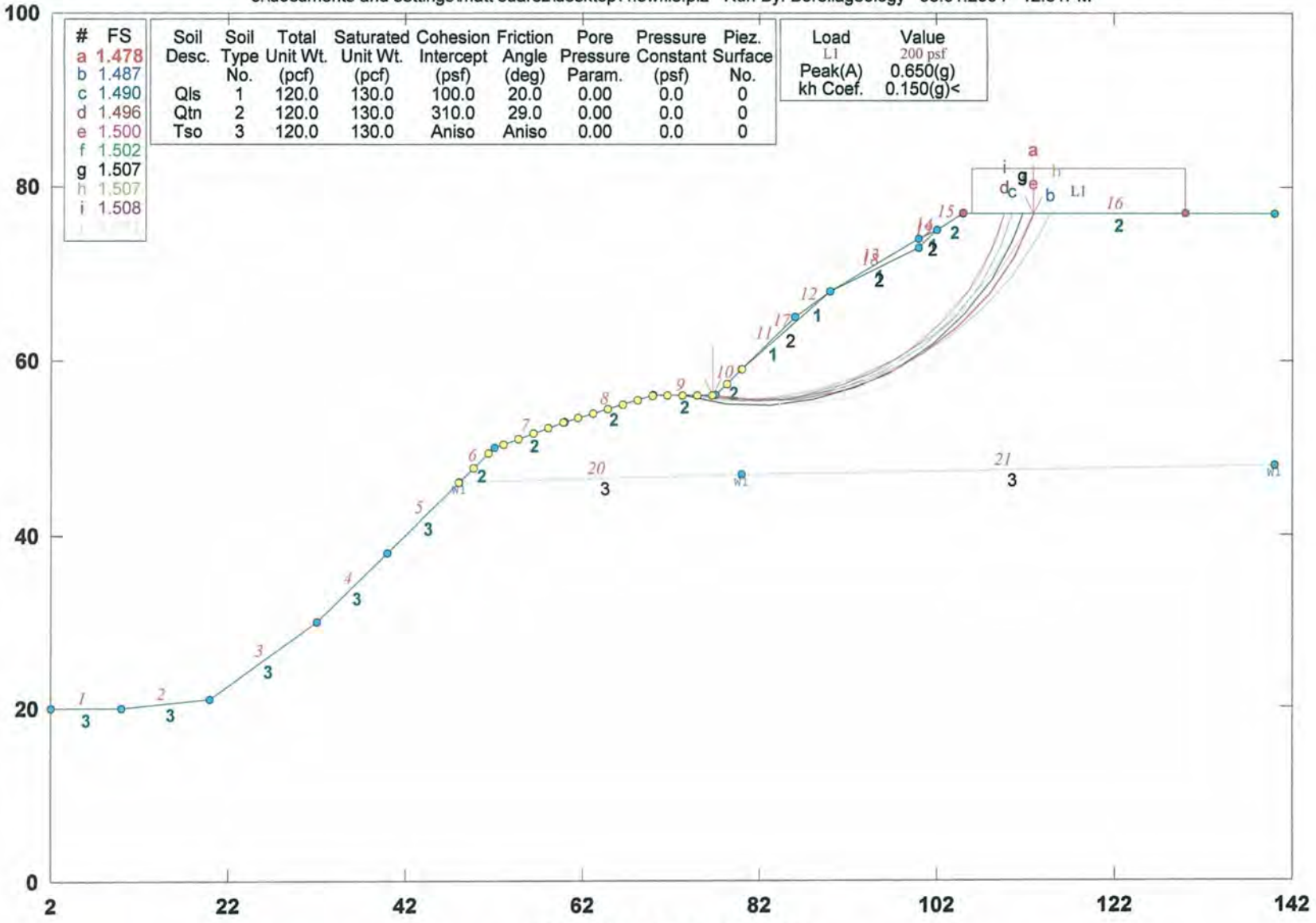

GSTABL7 v.2 FSmin=1.478

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

***** GSTABL7 *****

** GSTABL7 by Garry H. Gregory, P.E. **

** Original Version 1.0, January 1996; Current Version 2.004, June 2003 **

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SLOPE STABILITY ANALYSIS SYSTEM

Modified Bishop, Simplified Janbu, or GLE Method of Slices.
(Includes Spencer & Morgenstern-Price Type Analysis)
Including Pier/Pile, Reinforcement, Soil Nail, Tieback,
Nonlinear Undrained Shear Strength, Curved Phi Envelope,
Anisotropic Soil, Fiber-Reinforced Soil, Boundary Loads, Water
Surfaces, Pseudo-Static & Newmark Earthquake, and Applied Forces.

****

Analysis Run Date: 08.01.2004
Time of Run: 12:31PM
Run By: Borellageology
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Output Filename: C:\Documents and Settings\Matt Suarez\Desktop\-NewFile.OUT
Unit System: English
Plotted Output Filename: C:\Documents and Settings\Matt Suarez\Desktop\-NewFile.PLT
PROBLEM DESCRIPTION: Chuck Le 32051 Coast Hwy, Laguna Beach,
Profile B-B' pseudostatic stability

BOUNDARY COORDINATES
Note: User origin value specified.
Add 2.00 to X-values and 0.00 to Y-values listed.

16 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	2.00	20.00	10.00	20.00	3
2	10.00	20.00	20.00	21.00	3
3	20.00	21.00	32.00	30.00	3
4	32.00	30.00	40.00	38.00	3
5	40.00	38.00	48.00	46.00	3
6	48.00	46.00	52.00	50.00	2
7	52.00	50.00	60.00	53.00	2
8	60.00	53.00	70.00	56.00	2
9	70.00	56.00	77.00	56.00	2
10	77.00	56.00	80.00	59.00	2
11	80.00	59.00	86.00	65.00	1
12	86.00	65.00	90.00	68.00	1
13	90.00	68.00	100.00	74.00	1
14	100.00	74.00	102.00	75.00	1
15	102.00	75.00	105.00	77.00	2
16	105.00	77.00	140.00	77.00	2
17	80.00	59.00	90.00	68.00	2
18	90.00	68.00	100.00	73.00	2
19	100.00	73.00	102.00	75.00	2
20	48.00	46.00	80.00	47.00	3
21	80.00	47.00	140.00	48.00	3

Default Y-Origin = 0.00(ft)
Default X-Plus Value = 0.00(ft)
Default Y-Plus Value = 0.00(ft)

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	130.0	100.0	20.0	0.00	0.0	0
2	120.0	130.0	310.0	29.0	0.00	0.0	0
3	120.0	130.0	2700.0	40.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)
Soil Type 3 Is Anisotropic
Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	32.0	2700.00	40.00
2	36.0	1000.00	30.00
3	90.0	2700.00	40.00

ANISOTROPIC SOIL NOTES:
(1) An input value of 0.01 for C and/or Phi will cause Aniso C and/or Phi to be ignored in that range.
(2) An input value of 0.02 for Phi will set both Phi and C equal to zero, with no water weight in the tension crack.
(3) An input value of 0.03 for Phi will set both Phi and C equal to zero, with water weight in the tension crack.

1 PIEZOMETRIC SURFACE(S) SPECIFIED
Unit Weight of Water = 62.40 (pcf)
Piezometric Surface No. 1 Specified by 3 Coordinate Points
Pore Pressure Inclination Factor = 0.50

Point No.	X-Water (ft)	Y-Water (ft)
1	48.00	46.00
2	80.00	47.00
3	140.00	48.00

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (ft)	X-Right (ft)	Intensity (psf)	Deflection (deg)
1	106.00	130.00	200.0	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.
Specified Peak Ground Acceleration Coefficient (A) = 0.650(g)
Specified Horizontal Earthquake Coefficient (kh) = 0.150(g)
Specified Vertical Earthquake Coefficient (kv) = 0.000(g)
Specified Seismic Pore-Pressure Factor = 0.000
A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.
Janbus Empirical Coef. is being used for the case of c & phi both > 0
2000 Trial Surfaces Have Been Generated.
100 Surface(s) Initiate(s) From Each Of 20 Points Equally Spaced
Along The Ground Surface Between X = 48.00(ft)
and X = 80.00(ft)
Each Surface Terminates Between X = 105.00(ft)
and X = 130.00(ft)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)
5.00(ft) Line Segments Define Each Trial Failure Surface.
Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Evaluated. They Are Ordered - Most Critical First.
* * Safety Factors Are Calculated By The Simplified Janbu Method * *
Total Number of Trial Surfaces Attempted = 2000
Number of Trial Surfaces With Valid FS = 2000
Statistical Data On All Valid FS Values:
FS Max = 4.256 FS Min = 1.478 FS Ave = 2.454
Standard Deviation = 0.890 Coefficient of Variation = 36.27 %
Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.598	55.423
3	86.594	55.631
4	91.495	56.619
5	96.181	58.364
6	100.536	60.821
7	104.451	63.930
8	107.832	67.614
9	110.593	71.783

10	112.666	76.332
11	112.851	77.000

Factor of Safety
*** 1.478 ***

Individual data on the 18 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	0.4	0.9	0.0	0.0	0.	0.	0.1	0.0	0.0
2	3.0	618.2	0.0	0.0	0.	0.	92.7	0.0	0.0
3	1.6	821.5	0.0	0.0	0.	0.	123.2	0.0	0.0
4	4.4	3847.9	0.0	0.0	0.	0.	577.2	0.0	0.0
5	0.6	684.4	0.0	0.0	0.	0.	102.7	0.0	0.0
6	3.4	4393.3	0.0	0.0	0.	0.	659.0	0.0	0.0
7	1.5	2149.4	0.0	0.0	0.	0.	322.4	0.0	0.0
8	4.7	7203.9	0.0	0.0	0.	0.	1080.6	0.0	0.0
9	3.8	6147.0	0.0	0.0	0.	0.	922.0	0.0	0.0
10	0.5	865.5	0.0	0.0	0.	0.	129.8	0.0	0.0
11	1.5	2325.1	0.0	0.0	0.	0.	348.8	0.0	0.0
12	2.5	3783.2	0.0	0.0	0.	0.	567.5	0.0	0.0
13	0.5	828.6	0.0	0.0	0.	0.	124.3	0.0	0.0
14	1.0	1431.3	0.0	0.0	0.	0.	214.7	0.0	0.0
15	1.8	2282.4	0.0	0.0	0.	0.	342.4	0.0	366.3
16	2.8	2419.2	0.0	0.0	0.	0.	362.9	0.0	552.2
17	2.1	732.2	0.0	0.0	0.	0.	109.8	0.0	414.7
18	0.2	7.4	0.0	0.0	0.	0.	1.1	0.0	37.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	74.947	56.000
2	79.920	55.474
3	84.917	55.625
4	89.848	56.453
5	94.622	57.941
6	99.150	60.061
7	103.349	62.776
8	107.141	66.034
9	110.458	69.776
10	113.237	73.933
11	114.731	77.000

Factor of Safety
*** 1.487 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.601	55.446
3	86.592	55.745
4	91.459	56.889
5	96.061	58.845
6	100.262	61.556
7	103.942	64.941
8	106.991	68.904
9	109.322	73.327
10	110.515	77.000

Factor of Safety
*** 1.490 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.610	55.537
3	86.594	55.936
4	91.436	57.185
5	95.991	59.248

6	100.124	62.061
7	103.712	65.543
8	106.650	69.589
9	108.848	74.080
10	109.697	77.000

Factor of Safety
*** 1.496 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.239	55.512
3	83.236	55.698
4	88.162	56.555
5	92.928	58.067
6	97.447	60.206
7	101.638	62.934
8	105.423	66.201
9	108.734	69.947
10	111.511	74.105
11	112.924	77.000

Factor of Safety
*** 1.500 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.231	55.432
3	83.229	55.577
4	88.155	56.433
5	92.909	57.983
6	97.393	60.194
7	101.517	63.021
8	105.195	66.408
9	108.354	70.284
10	110.927	74.571
11	111.948	77.000

Factor of Safety
*** 1.502 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.171	55.042
3	83.168	54.873
4	88.129	55.497
5	92.928	56.898
6	97.446	59.041
7	101.568	61.871
8	105.189	65.319
9	108.220	69.296
10	110.583	73.702
11	111.725	77.000

Factor of Safety
*** 1.507 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	76.632	56.000
2	81.550	55.098
3	86.548	54.967
4	91.506	55.610
5	96.306	57.011
6	100.832	59.137
7	104.974	61.937
8	108.634	65.343

9	111.724	69.274
10	114.170	73.635
11	115.421	77.000

Factor of Safety
*** 1.507 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	74.947	56.000
2	79.904	55.341
3	84.900	55.530
4	89.792	56.562
5	94.440	58.408
6	98.707	61.013
7	102.473	64.302
8	105.627	68.182
9	108.079	72.539
10	109.670	77.000

Factor of Safety
*** 1.508 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	73.263	56.000
2	78.192	55.157
3	83.191	55.107
4	88.136	55.851
5	92.899	57.370
6	97.362	59.626
7	101.409	62.561
8	104.940	66.102
9	107.864	70.158
10	110.108	74.626
11	110.857	77.000

Factor of Safety
*** 1.511 ***

**** END OF GSTABL7 OUTPUT ****

Chuck Le 32051 Coast Hwy, Laguna Beach, Profile B-B' static stability

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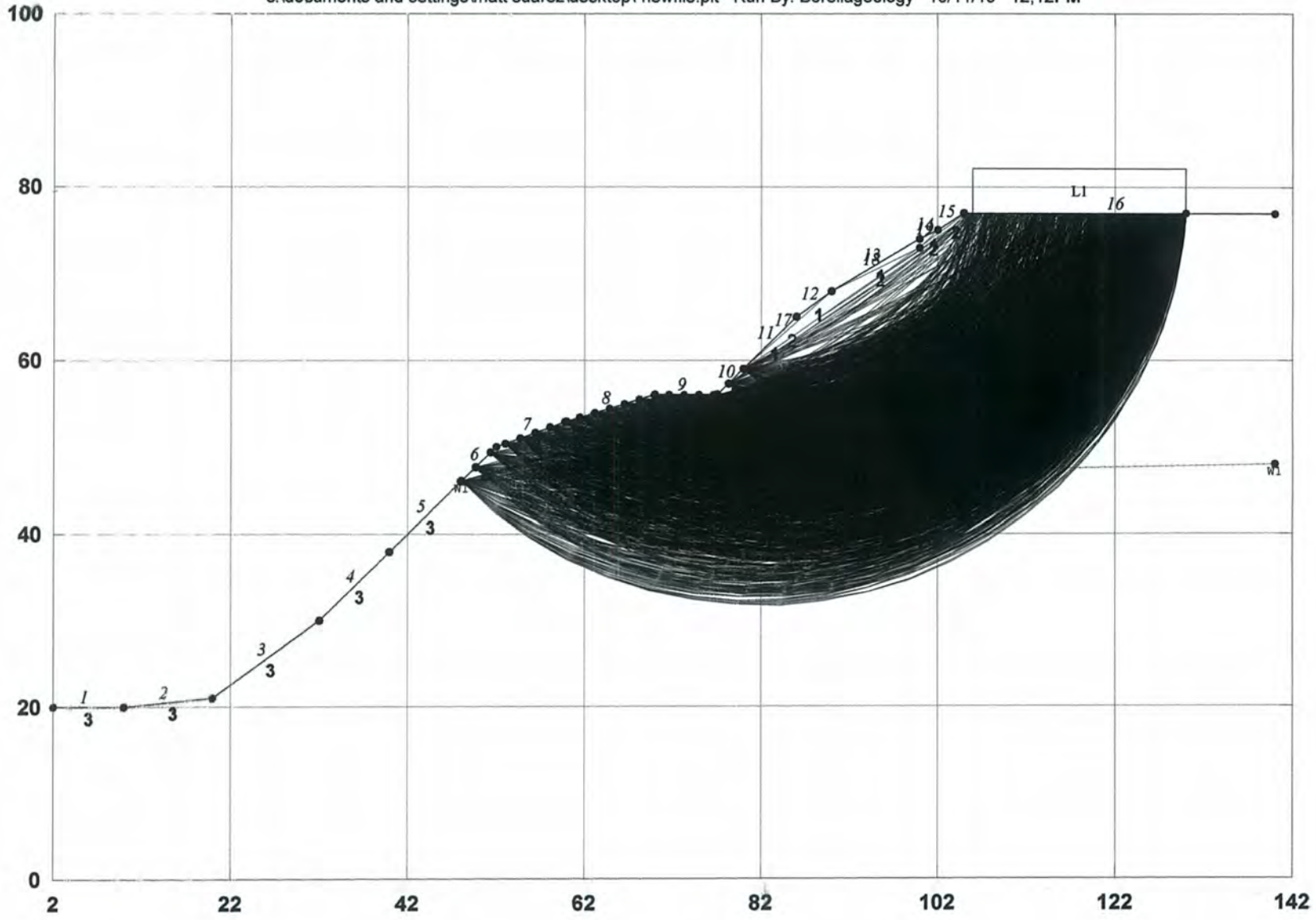


GSTABL7

Appendix 3: Standard Grading Specification, Backfill Criteria and Slope Maintenance

STANDARD GRADING SPECIFICATIONS

General

These specifications present the usual and minimum requirements for grading operations inspected by Borella Geology Inc.. No deviation from these specifications will be allowed, except where specifically superseded in the soils report signed by a registered engineering geologist and/or soils engineer.

The placement, spreading, mixing, watering and compaction of the fills in strict accordance with these specifications shall be the sole responsibility of the contractor. The construction, excavation and placement of fill shall be under the direct inspection of the soils engineer or any person or persons employed by the licensed civil engineer signing the soil report. If unsatisfactory soil-related conditions exist, the soil engineer shall have the authority to reject the compacted fill ground and, if necessary, excavation equipment will be shut down to permit completion of compaction. Conformance with these specifications will be discussed in the final report issued by the soils engineer.

Site Preparation

All brush, vegetation and other deleterious material such as rubbish shall be collected, piled and removed from the site prior to placing fill, leaving the site clear and free from objectionable material.

Soil, alluvium, or rock materials determined by the soils engineer as being unsuitable for placement in compacted fills shall be removed from the site. Any material incorporated as part of a compacted fill must be approved by the soils engineer.

The surface shall then be plowed or scarified to a minimum depth of 6 inches until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment used. After the area to receive fill has been cleared and scarified, it shall be bladed by the contractor until it is uniform and free from large clods, brought to the proper moisture content and compacted to minimum requirements. If the scarified zone is greater than twelve inches in depth, the excess shall be removed and placed in lifts restricted to six inches.

Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines or others not located prior to grading are to be removed or treated in a manner prescribed by the soils engineer.

Materials

Materials for compacted fill shall consist of materials approved by the soils engineer. These materials may be excavated from the cut area or imported from other approved sources and soils from one or more sources may be blended. Fill soils shall be free from organic vegetable matter and other unsuitable substances. Normally, the material shall contain no rocks or hard lumps greater than 6 inches in size and shall contain at least 50 percent of material smaller than 1/4 inch in size. Materials greater than 4 inches in size shall be placed so that they are completely surrounded by compacted fines; no nesting of rocks shall be permitted. No material of a perishable, spongy, or otherwise of an unsuitable nature shall be used in the fill soils.

Representative samples of materials to be utilized, as compacted fill shall be analyzed in the laboratory by the soils engineer to determine their physical properties. If any material other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the soils engineer as soon as possible.

Placing, Spreading and Compacting Fill Material

The material used in the compacting process shall be evenly spread, watered, processed and compacted in this lifts not to exceed six inches in thickness to obtain a uniformly dense layer.

When the moisture content of the fill material is below that specified by the soils engineer, water shall be added by the contractor until the moisture content is near optimum as specified.

When the moisture content of the fill material is above that specified by the soil engineer, the fill material shall be aerated by the contractor by blading, mixing, or other satisfactory methods until the moisture content is near optimum as specified.

After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted to 90 percent of the maximum laboratory density in compliance with ASTM D 1557 (5 layers). Compaction shall be accomplished by sheepsfoot rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers or other types of acceptable compacting equipment. Equipment shall be of such design that it will be able to compact the fill to the specified density. Compaction shall be continuous over the entire area and the equipment shall make sufficient passes to obtain the desired density uniformly.

A minimum relative compaction of 90 percent out to the finished slope face of all fill slopes will be required. Compacting of the slopes shall be accomplished by backrolling the slopes in increments of 2 to 5 feet in elevation gain or by

overbuilding and cutting back to the compacted inner core, or by any other procedure, which produces the required compaction.

Grading Inspections

The soils engineer shall inspect the placement of fill during the grading process and will file a written report upon completion of grading stating his observations as to compliance with these specifications.

One density test shall be required for each 2 vertical feet of fill placed or one each 1000 cubic yards of fill, whichever requires the greater number of tests.

All cleanouts and processed ground to receive fill must be inspected by the soils engineer and/or engineering geologist prior to any fill placement. The contractor shall notify the soils engineer when these areas are ready for inspection.

Protection of Work

During the grading process and prior to the complete construction of permanent drainage controls, it shall be the responsibility of the contractor to provide good drainage and prevent ponding of water and damage to adjoining properties or to finished work on the site.

After the soils engineer has terminated his inspections of the completed grading, no further excavations and/or filling shall be performed without the approval of the soils engineer, if it is to be subject to the recommendations of this report.

UTILITY TRENCH BACKFILL GUIDELINES

The following guidelines pertinent to utility trench backfills have been adopted by the County of Orange, Environmental Management Agency Grading Section effective March 31, 1986. The application of the guidelines is strictly enforced by the County reviewers and inspectors.

1. Each utility subcontractor (gas, electric, water, sewer, telephone, cable TV, irrigation, drainage, etc.) shall submit to the developer for dissemination to his consultants (civil engineer, soil engineer and utility contractor) a plot plan of all utility lines installed under his purview which identifies line type, material, size, depth and approximate location.

2. The developer or his agent shall provide a composite plot plan of all utilities or a copy of all individual utility plot plans to his soil engineer for use in evaluating whether all utility trench backfills are suitable for the intended use.

3. The soil engineer or engineering geologist shall provide the County a report which includes a plot plan showing the location of all utility trenches which:

a. are located within the load influence zone of a structure (1:1 projection),
b. are located beneath any hardscape,
c. are parallel and in close proximity to the top or toe of
a. slope and may adversely impact slope stability if improperly backfilled,
d. are located on the face of a slope in a trench 18 or more inches in depth.

Typically, trenches that are less than 18 inches in depth will not be within the load influence zone if located next to a structure and will not have a significant effect on slope stability if constructed near the top or toe of a slope and need not be shown on the plot plan unless determined to be significant by the soil engineer. This plot plan may be prepared by someone other than the soil engineer or engineering geologist but must meet his approval.

4. Backfill compaction test locations must be shown on the plot plan described in No. 3 above and a table of test data provided in the soil report.

5. The soil report (utility trench backfill) must state that <u>all</u> utility trenches within the subject lots have been backfilled in a manner suitable for the intended use. This includes the backfill of all trenches shown on the plot plan described in No. 3. <u>and</u> the backfill of those trenches which did not need to be plotted on this plan.

MAINTENANCE OF GRADED SITES

Sites graded in hillsides require maintenance and repair of slopes and drainage. The City of Los Angeles, Department of Building and Safety has published a Homeowner's Guide (June, 1974) containing "Recommendations for Maintenance of Graded Sites," which are pertinent to all graded sites:

"It is incumbent upon the hillside property owner to maintain his property in a manner which will assure the continued stability of the property. The following are recommendations regarding slope and yard maintenance in graded hillside areas:

1. Maintain existing slope planting, provide new approved planting where indicated, and maintain irrigation systems in working order.
2. Maintain paved diverter terraces, interceptor terrace downdrains, appurtenances such as inlets, and velocity reducer structures in a clean condition and in good repair.
3. Earth berms prevent water from flowing over slope. It is important that these berms be maintained.
4. Standing storm water on the pad area directly above descending slopes, whether natural, cut or fill, is a major contributor toward slope failure. It is important that the pad drainage be maintained at a minimum of 2 percent to the street or other approved locations to prevent this situation.
5. Side swales, which direct water around the house, should be maintained so that they will not become ineffective.
6. Catch basins, grates, and subsurface drainage piping should be kept free of silt and debris.
7. Roof gutters and downspouts should be inspected periodically to assure that they are not broken or clogged. All non-erosive drainage devices should be kept clean and in good repair.
8. Extensive landscaping or revision to the property may seriously alter the surface drainage pattern. When landscaping, homeowners should avoid disrupting flow patterns created when the property was originally graded. It should be remembered that normal property drainage in hillside areas is from the rear yard to the street. Some properties drain to natural water courses.
9. Any problems such as erosion should be repaired immediately in order that more serious problems may be averted.
10. Rodent activity should be controlled to prevent water penetration and loosening of the soil.
11. Care should be exercised to prevent loose fill from being placed on a grading site, especially on slopes.

Appendix 4: Additional Pool and Spa Recommendations, Typical Retaining Wall and Drainage Design Examples, Seismic Design Criteria as per USGS, Seismic Lateral Pressure Calculations on Retaining Walls

SWIMMING POOL/SPA DESIGN

1. During pool excavation, observation/testing should be performed by a geotechnical consultant to verify that exposed soil conditions are consistent with the design assumptions.

2. During construction the pool contractor should provide a sufficient level of inspection and control to assure that approved pool plans and specifications are implemented.

3. For a pool near a descending slope consisting of soils having low to very high expansion potentials, the pool shell should be designed assuming a total loss of soil support for the upper portion located within the creep zone or setback beyond the creep zone. See attached diagram

4. Soil expansion forces should be taken into consideration for design of the pool shell. An equivalent lateral fluid pressure of 65 pcf may be used for soils having **low expansion potentials.**

5. Installation of a moisture pressure release valve system beneath the pool bottom may be considered to release any potential water pressure accumulated beneath the pool which may produce additional pressure to the pool shell.

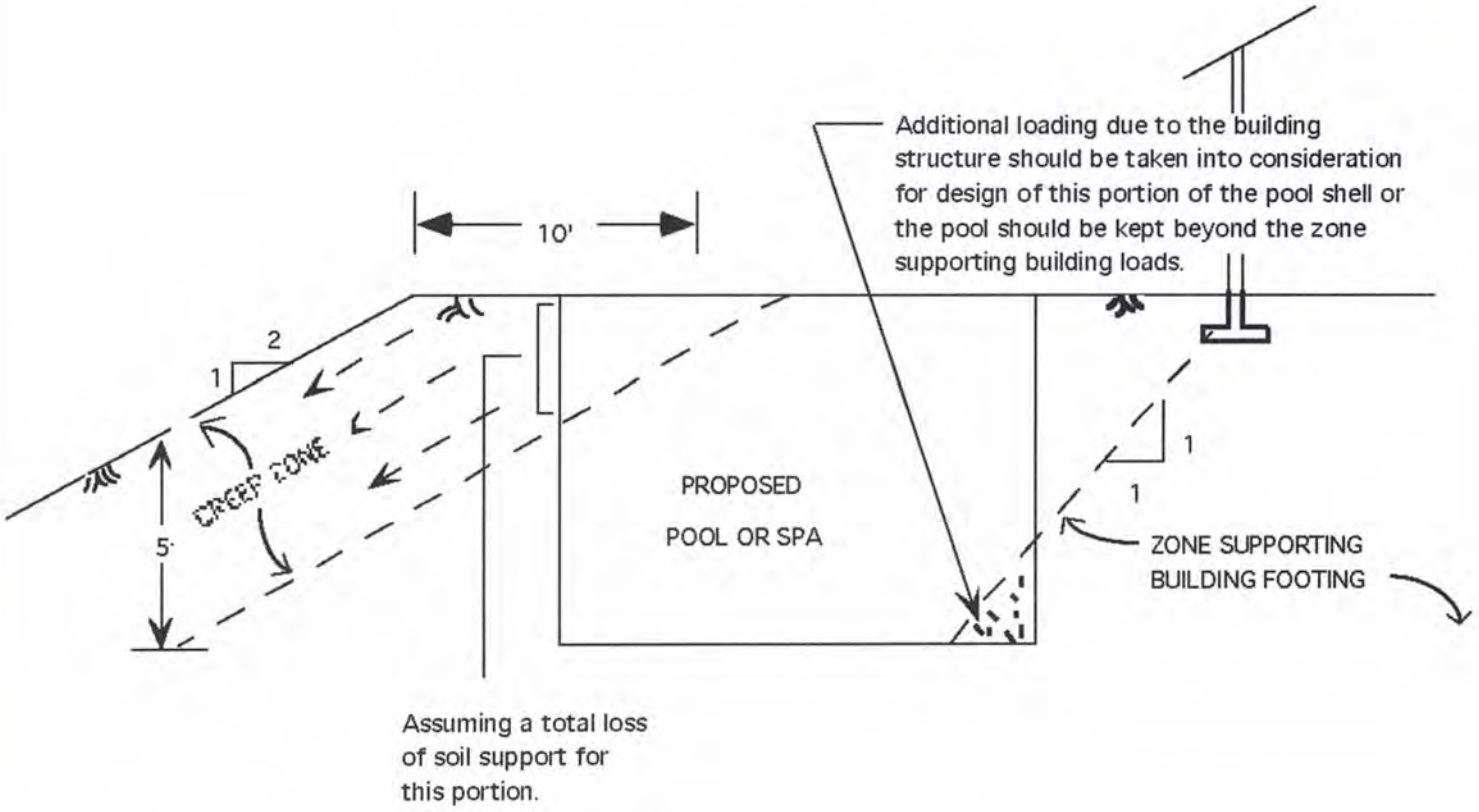
6. Heavy-duty pipes and coupling should be used for the pool plumbing system to minimize leaking which may produce additional local high pressures to the pool shell.

7. To reduce the potential for excessive cracking caused by expansive soil forces, pool deck concrete slabs should be a minimum of 4 inches thick and provided with construction or weakened plane joints at frequent intervals (e.g. every 6 feet or less). Slabs should be underlain by a layer of crushed rock, gravel, or clean sand having a minimum thickness of 2 inches for low expansion potential areas and 4 inches for medium, high, or very high expansion potential subgrades. Presoaking the subgrade (with a sprinkler system) to a minimum of 120 percent of optimum moisture content to a minimum depth of 12 inches for medium expansive soils, 130 percent to 18 inches for highly expansive soils, or 140 percent to 24 inches for very high expansion soils is also recommended. For very low or low expansion potential subgrade, water spraying the subgrade prior to pouring concrete is considered adequate. Presoaking should be observed, tested and accepted by a geotechnical consultant prior to pouring the concrete. Reinforcement of slabs may also be considered to further reduce unsightly cracking especially for high or very high expansion potential areas.

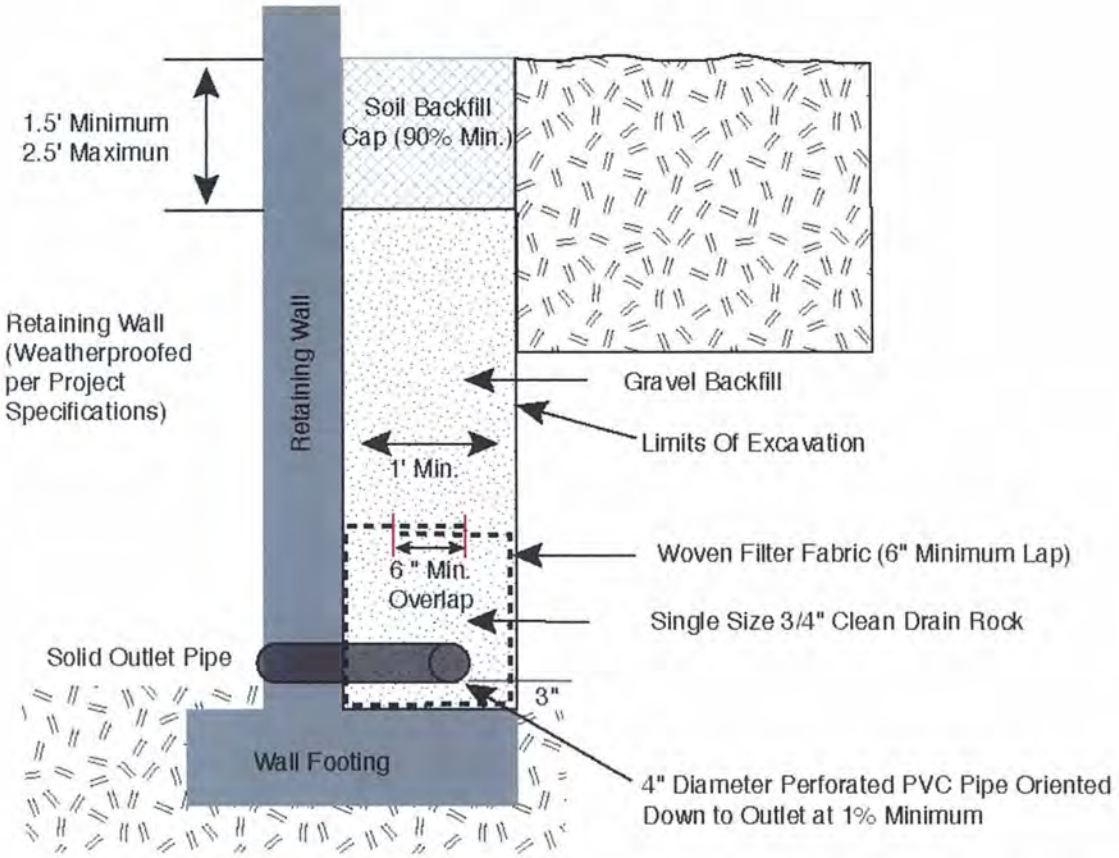
8. For swimming pool decks on subgrades having low expansion potential, a subdrain system consisting of 4-inch diameter perforated pipes (PVC Schedule 40, SDR35, Armco A2000 PVC, or approved equivalent), wrapped with filter fabric (Mirafi 140N, 140NS,

Supac 4NP, Amoco 4545, Trevira 1114 or approved equivalent) should be provided within the sand layer. One line of subdrain around the swimming pool area is considered sufficient. The purpose of this subdrain is to drain potential accumulated water within the sand layer and outlet the water into the area drain system minimizing this accumulation from substantially percolating down into the underlying subgrade soils.

Swimming Pool/Spa Diagram



General Retaining Wall Drainage Detail

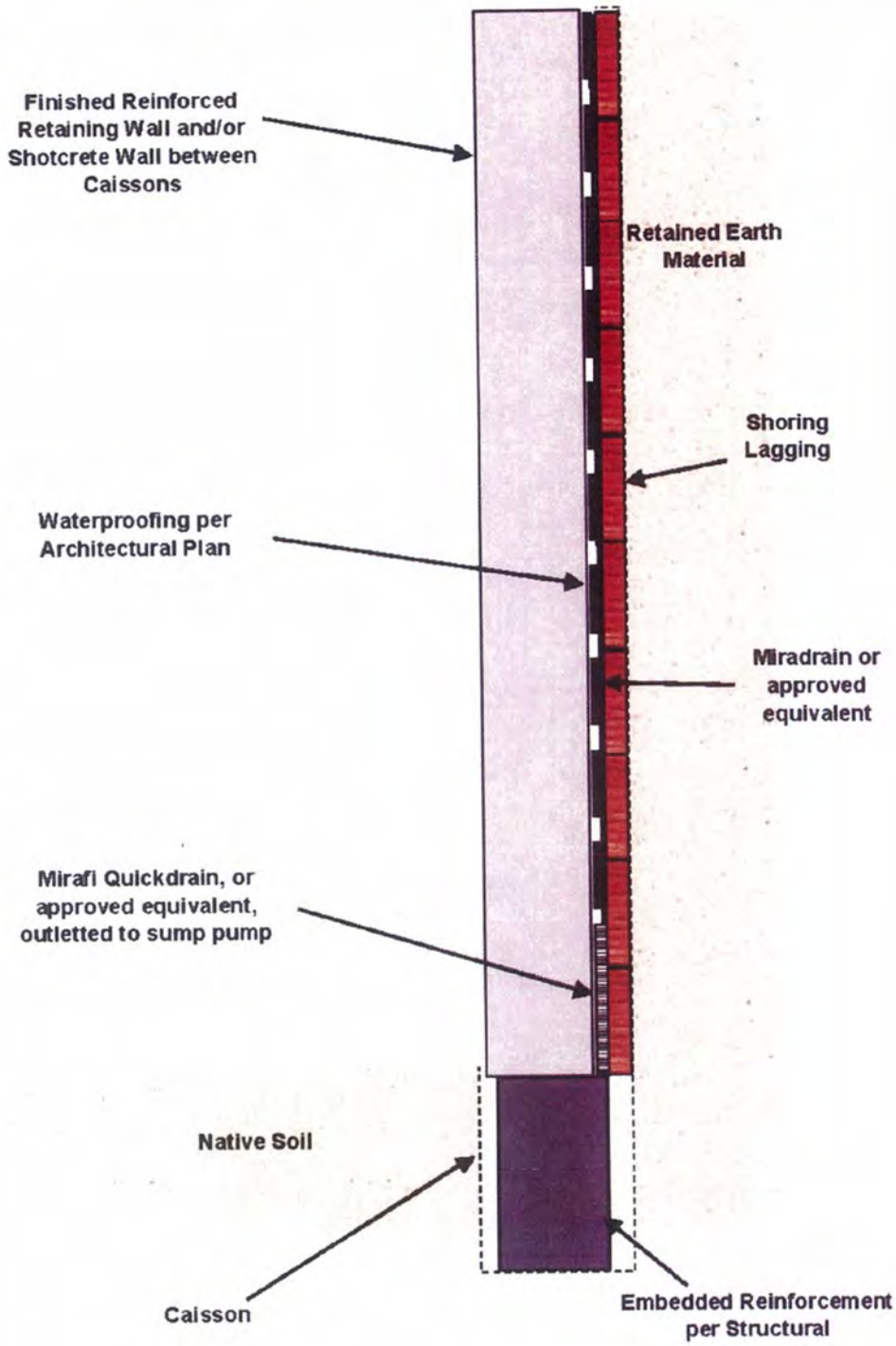


Filter fabric may be omited if well graded clean Class II aggregate meeting the gradation in table 1 is used

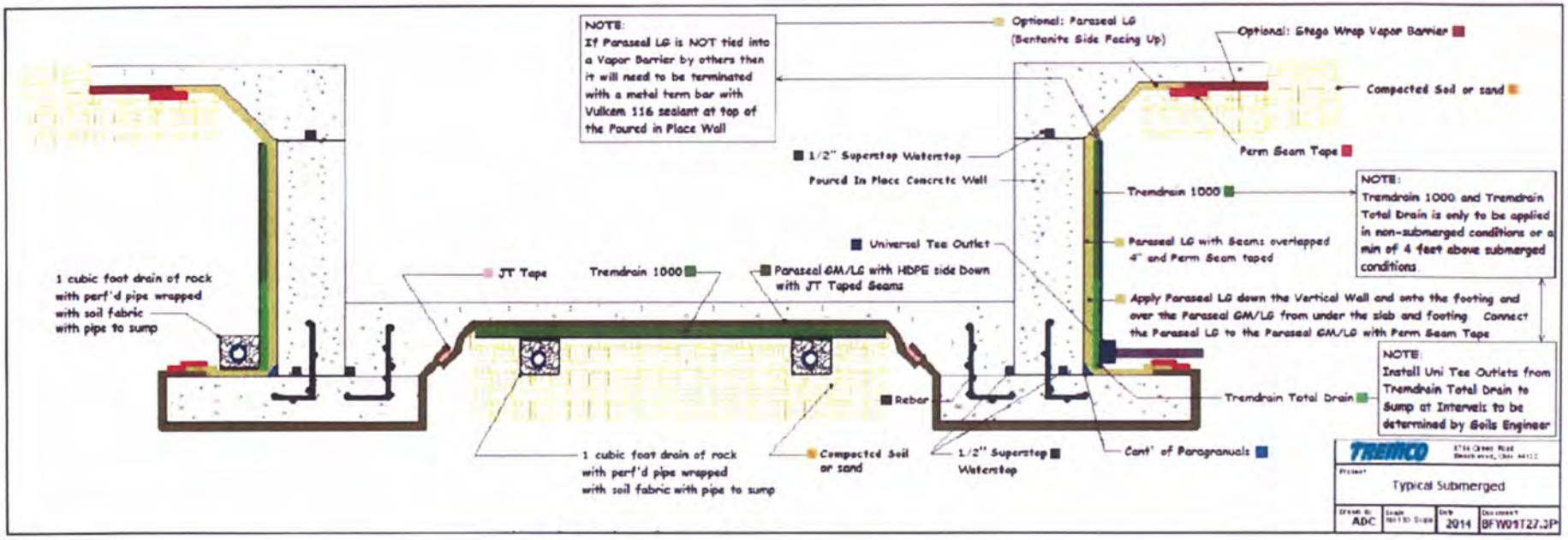
Table 1 - Gradatipn for Class II Aggregate

US Standard Sieve Size	% Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	24-40
No. 8	18-33
No. 30	5-15
No. 50	07
No. 200	0-3

Sand Equivalant . 75



	Conceptual Shoring/Retaining Wall Subdrain Detail		
	JOB NO	DATE	FIGURE

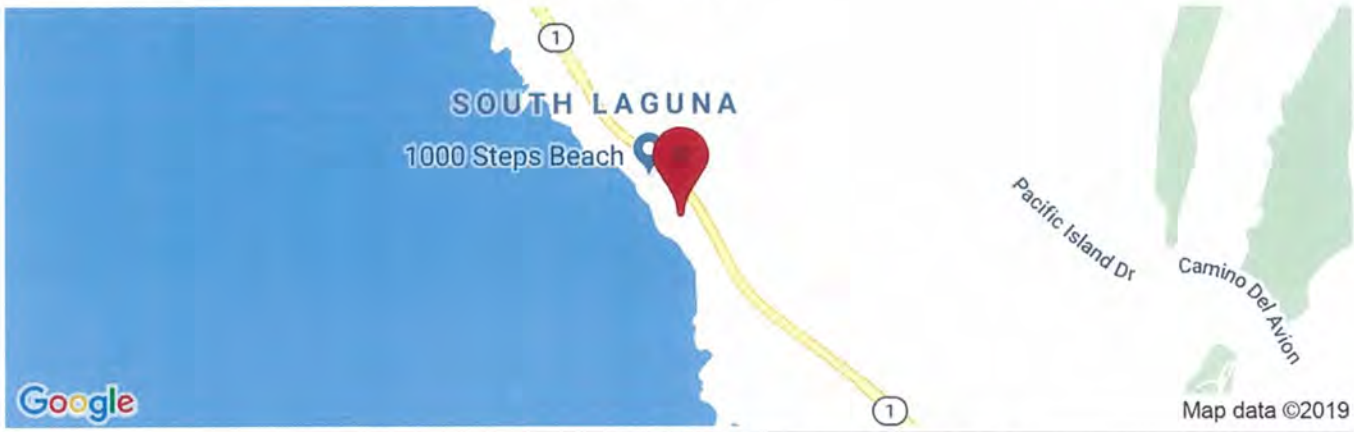

NOTE:
If Paraseal LG is NOT tied into a Vapor Barrier by others then it will need to be terminated with a metal term bar with Vulkem 116 sealant at top of the Poured in Place Wall
Optional: Paraseal LG (Bentonite Side Facing Up)
Optional: Stego Wrap Vapor Barrier
Compacted Soil or sand
Perm Seam Tape
1/2" Superstop Waterstop
Poured In Place Concrete Wall
Tremdrain 1000
NOTE:
Tremdrain 1000 and Tremdrain Total Drain is only to be applied in non-submerged conditions or a min of 4 feet above submerged conditions
Universal Tee Outlet
Paraseal LG with Seams overlapped 4" and Perm Seam taped
1 cubic foot drain of rock with perf'd pipe wrapped with soil fabric with pipe to sump
JT Tape
Tremdrain 1000
Paraseal GM/LG with HDPE side Down with JT Taped Seams
Apply Paraseal LG down the Vertical Wall and onto the footing and over the Paraseal GM/LG from under the slab and footing Connect the Paraseal LG to the Paraseal GM/LG with Perm Seam Tape
NOTE:
Install Uni Tee Outlets from Tremdrain Total Drain to Sump at Intervals to be determined by Soils Engineer
Rebar
Tremdrain Total Drain
1 cubic foot drain of rock with perf'd pipe wrapped with soil fabric with pipe to sump
Compacted Soil or sand
1/2" Superstop Waterstop
Cant' of Paragranuals
TREMCO
Typical Submerged
ADC
2014
BFW01T27.JP

OSHPD

Chuck le Residence

32051 Coast Hwy, Laguna Beach, CA 92651, USA

Latitude, Longitude: 33.496719, -117.73961700000001

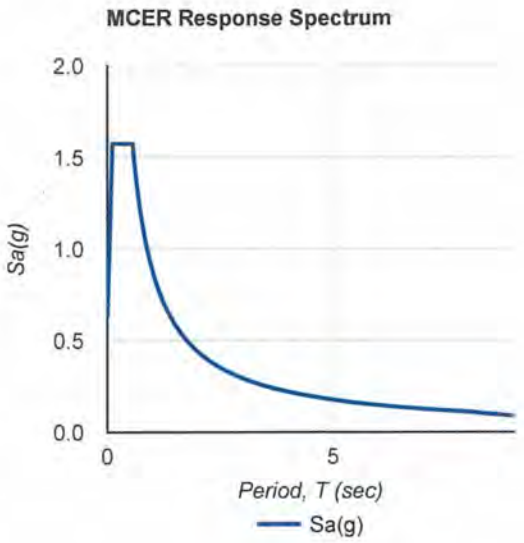


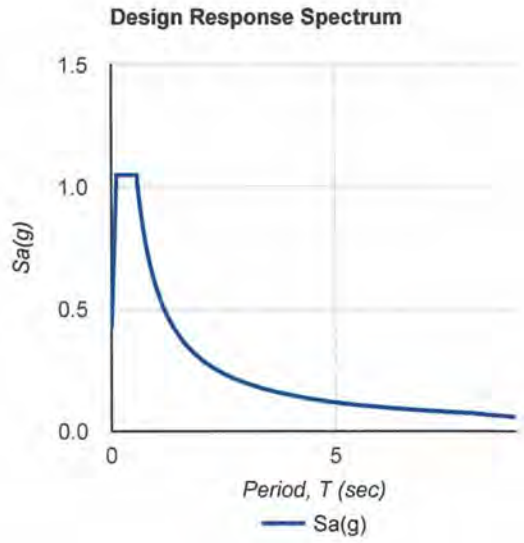
Date	10/11/2019, 12:05:50 PM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.574	MCE_R ground motion. (for 0.2 second period)
S_1	0.584	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.574	Site-modified spectral acceleration value
S_{M1}	0.877	Site-modified spectral acceleration value
S_{DS}	1.049	Numeric seismic design value at 0.2 second SA
S_{D1}	0.584	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.65	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.65	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.574	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.761	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	3.142	Factored deterministic acceleration value. (0.2 second)
S1RT	0.584	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.632	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.

Type	Value	Description
S1D	1.043	Factored deterministic acceleration value. (1.0 second)
PGAd	1.145	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.894	Mapped value of the risk coefficient at short periods
C_{R1}	0.925	Mapped value of the risk coefficient at a period of 1 s





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SEISMIC EARTH PRESSURE ON RETAINING WALLS
Mononobe-Okabe Method

Project: Le 32051 Coast hwy, laguna Beach
Date: 25-Oct-19

Internal angle of friction of soil, Ø	29	deg
Unit weight of soil, ∂	120	pcf
per USGS/ASCE7-10 SDS =	1.049	
Maximum horizontal acceleration, a max = S_{DS} / 2.5 =	0.42	g
Horizontal ground acceleration, Kh	0.12	g
= ((a max - 0.4) / (.6-.4) • (0.5-0.25) + 0.25) • a max		
(linear interpolation of Table 1 of Reference 1)		
Vertical ground acceleation, Kv; set equal to 0	0	g
Angle of backfill slope from horizontal, ß	0	deg
Angle of back of wall from vertical, å	0	deg
Angle of wall friction, Ω = 0.67Ø	19.4	deg
¥ = $\tan^{-1}$ (Kh/(1-Kv)	6.8	deg

Seismic Pressure Analysis

Total (active+seismic) pressure coefficient, Kae
Kae=$\cos^2$ (Ø-¥-å) / [cos(¥)$\cos^2$(å)cos(Ω+å+¥)(1+((sin(Ø+Ω)sin(Ø-¥-ß))/(cos(Ω+å+¥)cos(ß-å)))$^{1/2}$)^2]

$\cos^2$ (Ø-¥-å)	0.86
cos(¥)	0.99
$\cos^2$(å)	1.00
cos(Ω+å+¥)	0.90
sin(Ø+Ω)	0.75
sin(Ø-¥-ß)	0.38
cos(Ω+å+¥)	0.90
cos(ß-å)	1.00
((sin(Ø+Ω)sin(Ø-¥-ß))/(cos(Ω+å+¥)cos(ß-å)))$^{1/2}$	0.56
(1+((sin(Ø+Ω)sin(Ø-¥-ß))/(cos(Ω+å+¥)cos(ß-å)))$^{1/2}$)^2	2.44
Kae =	0.40

Active Pressure Analysis

Active pressure coefficient, Ka (Coulomb Theory)

$Ka = \cos^2(Ø-å) / \cos^2(å)\cos(\Omega+å)[1+((\sin(\Omega+Ø)\sin(Ø-ß))/(\cos(\Omega+å)\cos(ß-å)))^{1/2}]^2$

$\cos^2(Ø-å)$	0.77
$\cos^2(å)$	1.00
$\cos(\Omega+å)$	0.94
$\sin(Ø+\Omega)$	0.75
$\sin(Ø-ß)$	0.48
$\cos(\Omega+å)$	0.94
$\cos(ß-å)$	1.00
$((\sin(\Omega+Ø)\sin(Ø-ß))/(\cos(\Omega+å)\cos(ß-å)))^{1/2}$	0.62
$[1+((\sin(\Omega+Ø)\sin(Ø-ß))/(\cos(\Omega+å)\cos(ß-å)))^{1/2}]^2$	2.62
Ka =	0.31

Seismic Earth Pressure

Seismic earth pressure increment coefficient, $\Delta Kae = Kae-Ka$	0.09
Seismic pressure, $\partial e = \Delta Kae \bullet \partial$ (Equivalent Fluid Pressure)	10.5 psf/ft

Per Reference 2, the resultant force acts at 1/3 the height of the wall

References:

1) Lew, M, Sitar, N; Atik, L.A.:Pourzanjani, M; and Hudson, M.B., "Seismic Earth Pressures on Deep Building Basements", Structural Engineers Association of California 2010 Convention Proceedings

2) Atik, L.A. and Sitar, N. (October 2010), "Seismic Earth Pressures on Cantilever Retaining Structures", ASCE, Journal of Geotechnical and Geoenvironmental Engineering

3) Mononobe, N. and Matsuo, M. (1932), "Experimental Investigation of Lateral Earth Pressure During Earthquakes", Earthquake Research Institute and Research Office of Public Works. 884-902

4) Mononobe, N. and Matsuo, M. (1929), "On Determination of Earth Pressures During Earthquakes", World Engineering Congress, 9, 179-187

5) Okabe, S. (1926), "General Theory of Earth Pressures" J. Japan, Society of Civil Engineering, 12(1), 123-134

Table 1 - Horizontal Ground Acceleration for Cohesionless Backfill or Retained Earth*
(Reference 1)

Peak Ground Acceleration	Recommended Kh
<0.4	0.25PGA
0.4	0.25PGA
0.6	0.5PGA
1.0	0.67PGA

* For other values of peak ground acceleration, interpolation of tabulated value may be used.

Borella Geology, Inc.
Consulting Engineering Geology

February 12, 2020

Chuck Le Property
32051 South Coast Hwy
Laguna Beach, CA 92651
Chuckle@7daydental.com

Attn: Horst Architect AIA
Jaime@horst-architects.com
Horst@horst-architects.com

Subject: Graphic determination for Ocean Bluff (cliff) face top and Coastal Bluff Top
Chuck Le Property
32051 South Coast Hwy
Laguna Beach, Ca. 92651

Dear Mr. Lee:

Attached is a modified geologic map (figure 1) showing the location of the **top of the Ocean bluff (sea cliff) face** and **Coastal Bluff top** as per our site meetings, consultations with the city of Laguna Beach, inspections, review of previous reports and aerial photographs dating back to 1939. A blue dashed line on figure 1 marks both the top of the sea cliff face and top of the Coastal Bluff top face. The top of the sea cliff varies from approximately 60-70 feet above sea level with a rounded top averaging 65-68 feet above sea level.

Due to the presence of a southerly coastal canyon surficial erosion of the terrace top towards the south has occurred with the top of the surficial erosion at an elevation of 130 feet. Based in this the top of the Coastal Bluff is at 130 feet above sea level. Construction of the new residence will be at elevations above and landward of the 130 foot contour line.

Please note that a final determination of the bluff top will occur after a review by governing agencies has been completed.

1617 Hillcrest Drive, Laguna Beach, CA 92651 (949) 494-3566 Fax:(949) 497-0468 borellageology@yahoo.com

I we can be of any further assistance to you, please feel free to contact us.
Sincerely,
Borella Geology Inc.

Peter E Borella

Peter E. Borella, PhD
C.E.G. #1394

CERTIFIED ENGINEERING GEOLOGIST
Peter Borella, Ph.D.
CEG 1394
P.G. 4288
STATE OF CALIFORNIA

Appendix F

Noise and Vibration Calculations

Noise Measurement 1 - 32051 Coast Highway

Data Logger 2		
Duration (seconds)		3
Weighting	A	
Response	SLOW	
Range	40-100	
L05		75.9
L10		74.6
L50		68.6
L90		58.4
L95		53.8
Lmax		84.5
Time	8/30/2022	8:49
SEL		99.5
Leq		**71.2**

Noise Level Graph Inputs		
Start	0.35962	
End	0.37000	
Interval	0:01:00	0.000694

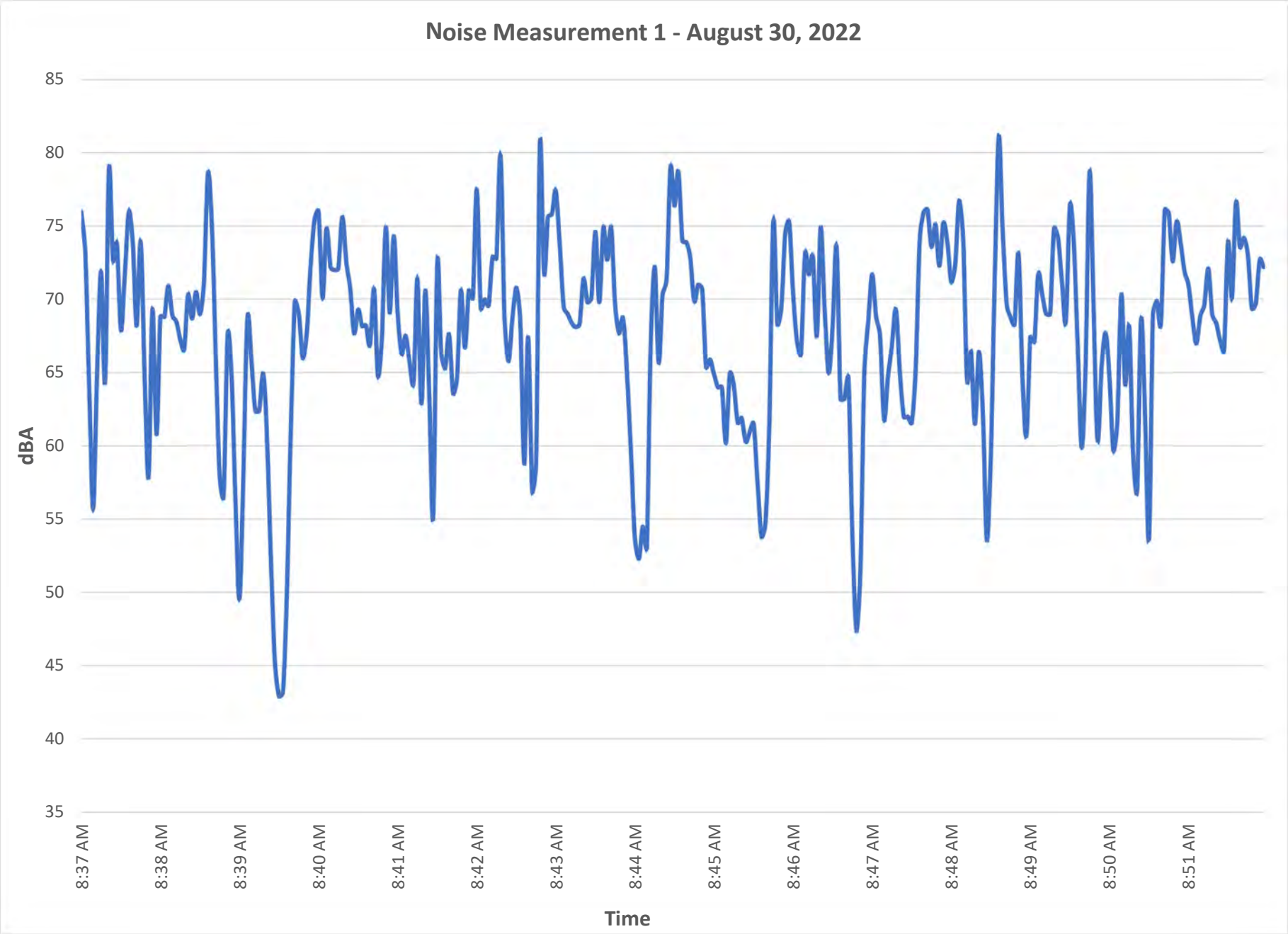
No.s	Date Time	Time	dB	Sound Energy
1	8/30/2022 8:37	8:37 AM	76	119432151.2
2	8/30/2022 8:37	8:37 AM	73.1	61252138.34
3	8/30/2022 8:37	8:37 AM	63.9	7364126.747
4	8/30/2022 8:38	8:38 AM	55.7	1114605.687
5	8/30/2022 8:38	8:38 AM	65.2	9933933.644
6	8/30/2022 8:38	8:38 AM	71.9	46464498.57
7	8/30/2022 8:38	8:38 AM	64.4	8262686.11
8	8/30/2022 8:38	8:38 AM	78.9	232874135
9	8/30/2022 8:38	8:38 AM	72.7	55862614.1
10	8/30/2022 8:38	8:38 AM	73.8	71964987.57
11	8/30/2022 8:38	8:38 AM	67.9	18497850.06
12	8/30/2022 8:38	8:38 AM	71.7	44373251.65
13	8/30/2022 8:38	8:38 AM	76	119432151.2
14	8/30/2022 8:38	8:38 AM	73.9	73641267.47
15	8/30/2022 8:38	8:38 AM	68.2	19820803.44
16	8/30/2022 8:38	8:38 AM	73.9	73641267.47
17	8/30/2022 8:38	8:38 AM	64.9	9270886.298
18	8/30/2022 8:38	8:38 AM	57.9	1849785.006
19	8/30/2022 8:38	8:38 AM	69.3	25534141.15
20	8/30/2022 8:38	8:38 AM	60.8	3606793.304
21	8/30/2022 8:38	8:38 AM	68.8	22757327.25
22	8/30/2022 8:38	8:38 AM	68.8	22757327.25
23	8/30/2022 8:38	8:38 AM	70.9	36908063.12
24	8/30/2022 8:39	8:39 AM	68.9	23287413.5
25	8/30/2022 8:39	8:39 AM	68.5	21238373.53
26	8/30/2022 8:39	8:39 AM	67.3	16110953.89
27	8/30/2022 8:39	8:39 AM	66.6	13712645.69
28	8/30/2022 8:39	8:39 AM	70.3	32145579.16
29	8/30/2022 8:39	8:39 AM	68.7	22239307.24
30	8/30/2022 8:39	8:39 AM	70.5	33660553.63
31	8/30/2022 8:39	8:39 AM	69	23829847.04
32	8/30/2022 8:39	8:39 AM	71.1	38647486.55
33	8/30/2022 8:39	8:39 AM	78.6	217330788
34	8/30/2022 8:39	8:39 AM	75.1	97078097.08
35	8/30/2022 8:39	8:39 AM	66.2	12506081.5
36	8/30/2022 8:39	8:39 AM	57.9	1849785.006
37	8/30/2022 8:39	8:39 AM	56.6	1371264.569
38	8/30/2022 8:39	8:39 AM	67.6	17263198.12
39	8/30/2022 8:39	8:39 AM	64.8	9059855.161
40	8/30/2022 8:39	8:39 AM	56	1194321.512
41	8/30/2022 8:39	8:39 AM	49.6	273603.2518
42	8/30/2022 8:39	8:39 AM	58.4	2075492.913
43	8/30/2022 8:39	8:39 AM	68.7	22239307.24
44	8/30/2022 8:40	8:40 AM	65.8	11405681.89
45	8/30/2022 8:40	8:40 AM	62.4	5213402.486
46	8/30/2022 8:40	8:40 AM	62.4	5213402.486

47	8/30/2022 8:40	8:40 AM	64.9	9270886.298
48	8/30/2022 8:40	8:40 AM	60.3	3214557.916
49	8/30/2022 8:40	8:40 AM	51.7	443732.5165
50	8/30/2022 8:40	8:40 AM	45.1	97078.09708
51	8/30/2022 8:40	8:40 AM	42.9	58495.33799
52	8/30/2022 8:40	8:40 AM	43.2	62678.88393
53	8/30/2022 8:40	8:40 AM	50.3	321455.7916
54	8/30/2022 8:40	8:40 AM	61.3	4046888.648
55	8/30/2022 8:40	8:40 AM	69.8	28649777.58
56	8/30/2022 8:40	8:40 AM	69	23829847.04
57	8/30/2022 8:40	8:40 AM	66	11943215.12
58	8/30/2022 8:40	8:40 AM	67.7	17665309.66
59	8/30/2022 8:40	8:40 AM	72.3	50947309.57
60	8/30/2022 8:40	8:40 AM	75.5	106444016.8
61	8/30/2022 8:40	8:40 AM	76	119432151.2
62	8/30/2022 8:40	8:40 AM	70.1	30698789.77
63	8/30/2022 8:40	8:40 AM	74.8	90598551.61
64	8/30/2022 8:41	8:41 AM	72.2	49787607.22
65	8/30/2022 8:41	8:41 AM	72	47546795.77
66	8/30/2022 8:41	8:41 AM	72.1	48654302.92
67	8/30/2022 8:41	8:41 AM	75.6	108923416.4
68	8/30/2022 8:41	8:41 AM	72.6	54591025.76
69	8/30/2022 8:41	8:41 AM	70.7	35246926.65
70	8/30/2022 8:41	8:41 AM	67.7	17665309.66
71	8/30/2022 8:41	8:41 AM	69.3	25534141.15
72	8/30/2022 8:41	8:41 AM	68.2	19820803.44
73	8/30/2022 8:41	8:41 AM	68.2	19820803.44
74	8/30/2022 8:41	8:41 AM	66.9	14693364.58
75	8/30/2022 8:41	8:41 AM	70.7	35246926.65
76	8/30/2022 8:41	8:41 AM	64.8	9059855.161
77	8/30/2022 8:41	8:41 AM	67.2	15744223.81
78	8/30/2022 8:41	8:41 AM	74.9	92708862.98
79	8/30/2022 8:41	8:41 AM	69.1	24384915.48
80	8/30/2022 8:41	8:41 AM	74.3	80746044.12
81	8/30/2022 8:41	8:41 AM	69.1	24384915.48
82	8/30/2022 8:41	8:41 AM	66.3	12797385.56
83	8/30/2022 8:41	8:41 AM	67.5	16870239.76
84	8/30/2022 8:42	8:42 AM	65.7	11146056.87
85	8/30/2022 8:42	8:42 AM	64.3	8074604.412
86	8/30/2022 8:42	8:42 AM	71.4	41411527.94
87	8/30/2022 8:42	8:42 AM	62.9	5849533.799
88	8/30/2022 8:42	8:42 AM	70.6	34444608.64
89	8/30/2022 8:42	8:42 AM	63.3	6413886.269
90	8/30/2022 8:42	8:42 AM	55.2	993393.3644
91	8/30/2022 8:42	8:42 AM	72.5	53348382.3
92	8/30/2022 8:42	8:42 AM	66.4	13095474.97
93	8/30/2022 8:42	8:42 AM	65.3	10165324.68
94	8/30/2022 8:42	8:42 AM	67.6	17263198.12
95	8/30/2022 8:42	8:42 AM	63.6	6872602.958
96	8/30/2022 8:42	8:42 AM	64.6	8652094.509
97	8/30/2022 8:42	8:42 AM	70.6	34444608.64
98	8/30/2022 8:42	8:42 AM	66.7	14032054.24
99	8/30/2022 8:42	8:42 AM	70.6	34444608.64
100	8/30/2022 8:42	8:42 AM	70.1	30698789.77
101	8/30/2022 8:42	8:42 AM	77.5	168702397.6
102	8/30/2022 8:42	8:42 AM	69.4	26128907.7
103	8/30/2022 8:42	8:42 AM	70	30000000
104	8/30/2022 8:43	8:43 AM	69.6	27360325.18
105	8/30/2022 8:43	8:43 AM	72.9	58495337.99
106	8/30/2022 8:43	8:43 AM	72.8	57163821.54
107	8/30/2022 8:43	8:43 AM	79.8	286497775.8
108	8/30/2022 8:43	8:43 AM	69	23829847.04
109	8/30/2022 8:43	8:43 AM	65.8	11405681.89
110	8/30/2022 8:43	8:43 AM	68.6	21733078.8

111	8/30/2022 8:43	8:43 AM	70.8	36067933.04
112	8/30/2022 8:43	8:43 AM	68.6	21733078.8
113	8/30/2022 8:43	8:43 AM	58.8	2275732.725
114	8/30/2022 8:43	8:43 AM	67.4	16486226.22
115	8/30/2022 8:43	8:43 AM	56.9	1469336.458
116	8/30/2022 8:43	8:43 AM	58.8	2275732.725
117	8/30/2022 8:43	8:43 AM	80.6	344446086.4
118	8/30/2022 8:43	8:43 AM	71.8	45406837.45
119	8/30/2022 8:43	8:43 AM	75.6	108923416.4
120	8/30/2022 8:43	8:43 AM	75.8	114056818.9
121	8/30/2022 8:43	8:43 AM	77.4	164862262.2
122	8/30/2022 8:43	8:43 AM	73.6	68726029.58
123	8/30/2022 8:43	8:43 AM	69.5	26737528.14
124	8/30/2022 8:44	8:44 AM	69	23829847.04
125	8/30/2022 8:44	8:44 AM	68.4	20754929.13
126	8/30/2022 8:44	8:44 AM	68.1	19369626.87
127	8/30/2022 8:44	8:44 AM	68.3	20282489.26
128	8/30/2022 8:44	8:44 AM	71.4	41411527.94
129	8/30/2022 8:44	8:44 AM	69.8	28649777.58
130	8/30/2022 8:44	8:44 AM	70.1	30698789.77
131	8/30/2022 8:44	8:44 AM	74.6	86520945.09
132	8/30/2022 8:44	8:44 AM	69.8	28649777.58
133	8/30/2022 8:44	8:44 AM	74.9	92708862.98
134	8/30/2022 8:44	8:44 AM	72.7	55862614.1
135	8/30/2022 8:44	8:44 AM	74.9	92708862.98
136	8/30/2022 8:44	8:44 AM	69.6	27360325.18
137	8/30/2022 8:44	8:44 AM	67.7	17665309.66
138	8/30/2022 8:44	8:44 AM	68.7	22239307.24
139	8/30/2022 8:44	8:44 AM	65	9486832.981
140	8/30/2022 8:44	8:44 AM	59.5	2673752.814
141	8/30/2022 8:44	8:44 AM	53.7	703268.6446
142	8/30/2022 8:44	8:44 AM	52.3	509473.0957
143	8/30/2022 8:44	8:44 AM	54.5	845514.8794
144	8/30/2022 8:45	8:45 AM	53.1	612521.3834
145	8/30/2022 8:45	8:45 AM	67	15035617.01
146	8/30/2022 8:45	8:45 AM	72.2	49787607.22
147	8/30/2022 8:45	8:45 AM	65.7	11146056.87
148	8/30/2022 8:45	8:45 AM	70.3	32145579.16
149	8/30/2022 8:45	8:45 AM	71.4	41411527.94
150	8/30/2022 8:45	8:45 AM	79	238298470.4
151	8/30/2022 8:45	8:45 AM	76.4	130954749.7
152	8/30/2022 8:45	8:45 AM	78.7	222393072.4
153	8/30/2022 8:45	8:45 AM	74	75356592.95
154	8/30/2022 8:45	8:45 AM	73.9	73641267.47
155	8/30/2022 8:45	8:45 AM	72.8	57163821.54
156	8/30/2022 8:45	8:45 AM	69.9	29317116.63
157	8/30/2022 8:45	8:45 AM	71	37767762.35
158	8/30/2022 8:45	8:45 AM	70.7	35246926.65
159	8/30/2022 8:45	8:45 AM	65.4	10402105.51
160	8/30/2022 8:45	8:45 AM	65.9	11671354.35
161	8/30/2022 8:45	8:45 AM	64.9	9270886.298
162	8/30/2022 8:45	8:45 AM	64	7535659.295
163	8/30/2022 8:45	8:45 AM	64	7535659.295
164	8/30/2022 8:46	8:46 AM	60.2	3141385.644
165	8/30/2022 8:46	8:46 AM	64.9	9270886.298
166	8/30/2022 8:46	8:46 AM	64.1	7711187.348
167	8/30/2022 8:46	8:46 AM	61.6	4336319.312
168	8/30/2022 8:46	8:46 AM	61.9	4646449.857
169	8/30/2022 8:46	8:46 AM	60.3	3214557.916
170	8/30/2022 8:46	8:46 AM	60.9	3690806.312
171	8/30/2022 8:46	8:46 AM	61.5	4237612.634
172	8/30/2022 8:46	8:46 AM	57.6	1726319.812
173	8/30/2022 8:46	8:46 AM	53.8	719649.8757
174	8/30/2022 8:46	8:46 AM	54.7	885362.768

175	8/30/2022 8:46	8:46 AM	61.7	4437325.165
176	8/30/2022 8:46	8:46 AM	75.3	101653246.8
177	8/30/2022 8:46	8:46 AM	68.4	20754929.13
178	8/30/2022 8:46	8:46 AM	69.4	26128907.7
179	8/30/2022 8:46	8:46 AM	74.4	82626861.1
180	8/30/2022 8:46	8:46 AM	75.3	101653246.8
181	8/30/2022 8:46	8:46 AM	70.5	33660553.63
182	8/30/2022 8:46	8:46 AM	67.1	15385841.52
183	8/30/2022 8:46	8:46 AM	66.3	12797385.56
184	8/30/2022 8:47	8:47 AM	73.1	61252138.34
185	8/30/2022 8:47	8:47 AM	71.7	44373251.65
186	8/30/2022 8:47	8:47 AM	72.9	58495337.99
187	8/30/2022 8:47	8:47 AM	67.5	16870239.76
188	8/30/2022 8:47	8:47 AM	74.9	92708862.98
189	8/30/2022 8:47	8:47 AM	69.2	24952913.13
190	8/30/2022 8:47	8:47 AM	65	9486832.981
191	8/30/2022 8:47	8:47 AM	68.2	19820803.44
192	8/30/2022 8:47	8:47 AM	73.6	68726029.58
193	8/30/2022 8:47	8:47 AM	63.2	6267888.393
194	8/30/2022 8:47	8:47 AM	63.2	6267888.393
195	8/30/2022 8:47	8:47 AM	64.6	8652094.509
196	8/30/2022 8:47	8:47 AM	53.9	736412.6747
197	8/30/2022 8:47	8:47 AM	47.4	164862.2622
198	8/30/2022 8:47	8:47 AM	51.3	404688.8648
199	8/30/2022 8:47	8:47 AM	64.7	8853627.68
200	8/30/2022 8:47	8:47 AM	68.5	21238373.53
201	8/30/2022 8:47	8:47 AM	71.7	44373251.65
202	8/30/2022 8:47	8:47 AM	68.8	22757327.25
203	8/30/2022 8:47	8:47 AM	67.5	16870239.76
204	8/30/2022 8:48	8:48 AM	61.8	4540683.745
205	8/30/2022 8:48	8:48 AM	64.7	8853627.68
206	8/30/2022 8:48	8:48 AM	66.9	14693364.58
207	8/30/2022 8:48	8:48 AM	69.3	25534141.15
208	8/30/2022 8:48	8:48 AM	65.1	9707809.708
209	8/30/2022 8:48	8:48 AM	62	4754679.577
210	8/30/2022 8:48	8:48 AM	62	4754679.577
211	8/30/2022 8:48	8:48 AM	61.6	4336319.312
212	8/30/2022 8:48	8:48 AM	65.1	9707809.708
213	8/30/2022 8:48	8:48 AM	74	75356592.95
214	8/30/2022 8:48	8:48 AM	75.9	116713543.5
215	8/30/2022 8:48	8:48 AM	76.1	122214083.3
216	8/30/2022 8:48	8:48 AM	73.6	68726029.58
217	8/30/2022 8:48	8:48 AM	75.1	97078097.08
218	8/30/2022 8:48	8:48 AM	72.3	50947309.57
219	8/30/2022 8:48	8:48 AM	75.2	99339336.44
220	8/30/2022 8:48	8:48 AM	73.9	73641267.47
221	8/30/2022 8:48	8:48 AM	71.2	39547702.16
222	8/30/2022 8:48	8:48 AM	72.4	52134024.86
223	8/30/2022 8:48	8:48 AM	76.7	140320542.4
224	8/30/2022 8:49	8:49 AM	74.1	77111873.48
225	8/30/2022 8:49	8:49 AM	64.5	8455148.794
226	8/30/2022 8:49	8:49 AM	66.4	13095474.97
227	8/30/2022 8:49	8:49 AM	61.5	4237612.634
228	8/30/2022 8:49	8:49 AM	66.4	13095474.97
229	8/30/2022 8:49	8:49 AM	62.2	4978760.722
230	8/30/2022 8:49	8:49 AM	53.6	687260.2958
231	8/30/2022 8:49	8:49 AM	59.3	2553414.115
232	8/30/2022 8:49	8:49 AM	71.2	39547702.16
233	8/30/2022 8:49	8:49 AM	81.1	386474865.5
234	8/30/2022 8:49	8:49 AM	74.8	90598551.61
235	8/30/2022 8:49	8:49 AM	69.7	27997629.02
236	8/30/2022 8:49	8:49 AM	68.8	22757327.25
237	8/30/2022 8:49	8:49 AM	68.3	20282489.26
238	8/30/2022 8:49	8:49 AM	73.1	61252138.34

239	8/30/2022 8:49	8:49 AM	64.9	9270886.298
240	8/30/2022 8:49	8:49 AM	60.7	3524692.665
241	8/30/2022 8:49	8:49 AM	67.4	16486226.22
242	8/30/2022 8:49	8:49 AM	67.1	15385841.52
243	8/30/2022 8:49	8:49 AM	71.7	44373251.65
244	8/30/2022 8:50	8:50 AM	70.3	32145579.16
245	8/30/2022 8:50	8:50 AM	69	23829847.04
246	8/30/2022 8:50	8:50 AM	69	23829847.04
247	8/30/2022 8:50	8:50 AM	74.8	90598551.61
248	8/30/2022 8:50	8:50 AM	74.2	78908039.76
249	8/30/2022 8:50	8:50 AM	71.2	39547702.16
250	8/30/2022 8:50	8:50 AM	68.5	21238373.53
251	8/30/2022 8:50	8:50 AM	76.4	130954749.7
252	8/30/2022 8:50	8:50 AM	73.9	73641267.47
253	8/30/2022 8:50	8:50 AM	66.6	13712645.69
254	8/30/2022 8:50	8:50 AM	59.9	2931711.663
255	8/30/2022 8:50	8:50 AM	65.8	11405681.89
256	8/30/2022 8:50	8:50 AM	78.7	222393072.4
257	8/30/2022 8:50	8:50 AM	69.2	24952913.13
258	8/30/2022 8:50	8:50 AM	60.4	3289434.588
259	8/30/2022 8:50	8:50 AM	65.2	9933933.644
260	8/30/2022 8:50	8:50 AM	67.7	17665309.66
261	8/30/2022 8:50	8:50 AM	64.8	9059855.161
262	8/30/2022 8:50	8:50 AM	59.7	2799762.902
263	8/30/2022 8:50	8:50 AM	61.6	4336319.312
264	8/30/2022 8:51	8:51 AM	70.3	32145579.16
265	8/30/2022 8:51	8:51 AM	64.2	7890803.976
266	8/30/2022 8:51	8:51 AM	68.1	19369626.87
267	8/30/2022 8:51	8:51 AM	59.4	2612890.77
268	8/30/2022 8:51	8:51 AM	57	1503561.701
269	8/30/2022 8:51	8:51 AM	68.6	21733078.8
270	8/30/2022 8:51	8:51 AM	62.4	5213402.486
271	8/30/2022 8:51	8:51 AM	53.7	703268.6446
272	8/30/2022 8:51	8:51 AM	68.9	23287413.5
273	8/30/2022 8:51	8:51 AM	69.9	29317116.63
274	8/30/2022 8:51	8:51 AM	68.3	20282489.26
275	8/30/2022 8:51	8:51 AM	76.1	122214083.3
276	8/30/2022 8:51	8:51 AM	75.9	116713543.5
277	8/30/2022 8:51	8:51 AM	72.6	54591025.76
278	8/30/2022 8:51	8:51 AM	75.3	101653246.8
279	8/30/2022 8:51	8:51 AM	73.9	73641267.47
280	8/30/2022 8:51	8:51 AM	71.9	46464498.57
281	8/30/2022 8:51	8:51 AM	71	37767762.35
282	8/30/2022 8:51	8:51 AM	68.7	22239307.24
283	8/30/2022 8:51	8:51 AM	67	15035617.01
284	8/30/2022 8:52	8:52 AM	68.9	23287413.5
285	8/30/2022 8:52	8:52 AM	69.6	27360325.18
286	8/30/2022 8:52	8:52 AM	72.1	48654302.92
287	8/30/2022 8:52	8:52 AM	69	23829847.04
288	8/30/2022 8:52	8:52 AM	68.4	20754929.13
289	8/30/2022 8:52	8:52 AM	67.2	15744223.81
290	8/30/2022 8:52	8:52 AM	66.5	13400507.76
291	8/30/2022 8:52	8:52 AM	73.9	73641267.47
292	8/30/2022 8:52	8:52 AM	70.1	30698789.77
293	8/30/2022 8:52	8:52 AM	76.6	137126456.9
294	8/30/2022 8:52	8:52 AM	73.6	68726029.58
295	8/30/2022 8:52	8:52 AM	74.2	78908039.76
296	8/30/2022 8:52	8:52 AM	73.1	61252138.34
297	8/30/2022 8:52	8:52 AM	69.4	26128907.7
298	8/30/2022 8:52	8:52 AM	69.7	27997629.02
299	8/30/2022 8:52	8:52 AM	72.7	55862614.1
300	8/30/2022 8:52	8:52 AM	72.2	49787607.22


Noise Measurement 1 - August 30, 2022
85
80
75
70
65
60
55
50
45
40
35
dBA
8:37 AM
8:38 AM
8:39 AM
8:40 AM
8:41 AM
8:42 AM
8:43 AM
8:44 AM
8:45 AM
8:46 AM
8:47 AM
8:48 AM
8:49 AM
8:50 AM
8:51 AM
Time

Noise Measurement 1 - 32035 Point Place

Data Logger 2		
Duration (seconds)		3
Weighting	A	
Response	SLOW	
Range	40-100	
L05		51.7
L10		49.9
L50		44.9
L90		41.6
L95		40.9
Lmax		57.4
Time		8/30/2022 9:06
SEL		76.7
Leq		**47.2**

Noise Level Graph Inputs		
Start	0.37458	
End	0.38497	
Interval	0:01:00	0.000694

No.s	Date Time	Time	dB	Sound Energy
1	8/30/2022 8:59	8:59 AM	45.1	97078.09708
2	8/30/2022 8:59	8:59 AM	43.7	70326.86446
3	8/30/2022 8:59	8:59 AM	45.3	101653.2468
4	8/30/2022 8:59	8:59 AM	46.3	127973.8556
5	8/30/2022 8:59	8:59 AM	45.4	104021.0551
6	8/30/2022 8:59	8:59 AM	43.8	71964.98757
7	8/30/2022 8:59	8:59 AM	43.8	71964.98757
8	8/30/2022 8:59	8:59 AM	45.7	111460.5687
9	8/30/2022 8:59	8:59 AM	47.1	153858.4152
10	8/30/2022 8:59	8:59 AM	47.9	184978.5006
11	8/30/2022 8:59	8:59 AM	47.9	184978.5006
12	8/30/2022 8:59	8:59 AM	49.3	255341.4115
13	8/30/2022 9:00	9:00 AM	49.9	293171.1663
14	8/30/2022 9:00	9:00 AM	51.1	386474.8655
15	8/30/2022 9:00	9:00 AM	51.9	464644.9857
16	8/30/2022 9:00	9:00 AM	54.5	845514.8794
17	8/30/2022 9:00	9:00 AM	54.5	845514.8794
18	8/30/2022 9:00	9:00 AM	53.9	736412.6747
19	8/30/2022 9:00	9:00 AM	52.7	558626.141
20	8/30/2022 9:00	9:00 AM	52.6	545910.2576
21	8/30/2022 9:00	9:00 AM	50.3	321455.7916
22	8/30/2022 9:00	9:00 AM	49.1	243849.1548
23	8/30/2022 9:00	9:00 AM	48.8	227573.2725
24	8/30/2022 9:00	9:00 AM	47.8	180767.8758
25	8/30/2022 9:00	9:00 AM	49.4	261289.077
26	8/30/2022 9:00	9:00 AM	49.2	249529.1313
27	8/30/2022 9:00	9:00 AM	46.4	130954.7497
28	8/30/2022 9:00	9:00 AM	49.7	279976.2902
29	8/30/2022 9:00	9:00 AM	47.8	180767.8758
30	8/30/2022 9:00	9:00 AM	47.2	157442.2381
31	8/30/2022 9:00	9:00 AM	48.8	227573.2725
32	8/30/2022 9:00	9:00 AM	49.2	249529.1313
33	8/30/2022 9:01	9:01 AM	49.8	286497.7758
34	8/30/2022 9:01	9:01 AM	47.2	157442.2381
35	8/30/2022 9:01	9:01 AM	47.6	172631.9812
36	8/30/2022 9:01	9:01 AM	47.2	157442.2381
37	8/30/2022 9:01	9:01 AM	46.9	146933.6458
38	8/30/2022 9:01	9:01 AM	49.5	267375.2814
39	8/30/2022 9:01	9:01 AM	49.3	255341.4115
40	8/30/2022 9:01	9:01 AM	49	238298.4704
41	8/30/2022 9:01	9:01 AM	44.8	90598.55161
42	8/30/2022 9:01	9:01 AM	47.2	157442.2381
43	8/30/2022 9:01	9:01 AM	46.7	140320.5424
44	8/30/2022 9:01	9:01 AM	49.9	293171.1663
45	8/30/2022 9:01	9:01 AM	46.5	134005.0776
46	8/30/2022 9:01	9:01 AM	41.8	45406.83745

47	8/30/2022 9:01	9:01 AM	46.7	140320.5424
48	8/30/2022 9:01	9:01 AM	42.8	57163.82154
49	8/30/2022 9:01	9:01 AM	46.8	143589.0277
50	8/30/2022 9:01	9:01 AM	43.9	73641.26747
51	8/30/2022 9:01	9:01 AM	41.3	40468.88648
52	8/30/2022 9:01	9:01 AM	47.7	176653.0966
53	8/30/2022 9:02	9:02 AM	44.8	90598.55161
54	8/30/2022 9:02	9:02 AM	48.9	232874.135
55	8/30/2022 9:02	9:02 AM	48.2	198208.0344
56	8/30/2022 9:02	9:02 AM	45.6	108923.4164
57	8/30/2022 9:02	9:02 AM	47.7	176653.0966
58	8/30/2022 9:02	9:02 AM	45.4	104021.0551
59	8/30/2022 9:02	9:02 AM	47.7	176653.0966
60	8/30/2022 9:02	9:02 AM	44.9	92708.86298
61	8/30/2022 9:02	9:02 AM	45	94868.32981
62	8/30/2022 9:02	9:02 AM	44.1	77111.87348
63	8/30/2022 9:02	9:02 AM	42.9	58495.33799
64	8/30/2022 9:02	9:02 AM	41.4	41411.52794
65	8/30/2022 9:02	9:02 AM	41.8	45406.83745
66	8/30/2022 9:02	9:02 AM	42.2	49787.60722
67	8/30/2022 9:02	9:02 AM	43.2	62678.88393
68	8/30/2022 9:02	9:02 AM	45.1	97078.09708
69	8/30/2022 9:02	9:02 AM	43.5	67161.63416
70	8/30/2022 9:02	9:02 AM	43.9	73641.26747
71	8/30/2022 9:02	9:02 AM	45	94868.32981
72	8/30/2022 9:02	9:02 AM	44.8	90598.55161
73	8/30/2022 9:03	9:03 AM	47	150356.1701
74	8/30/2022 9:03	9:03 AM	45.7	111460.5687
75	8/30/2022 9:03	9:03 AM	46.6	137126.4569
76	8/30/2022 9:03	9:03 AM	46.2	125060.815
77	8/30/2022 9:03	9:03 AM	48.4	207549.2913
78	8/30/2022 9:03	9:03 AM	48.3	202824.8926
79	8/30/2022 9:03	9:03 AM	48.9	232874.135
80	8/30/2022 9:03	9:03 AM	46.1	122214.0833
81	8/30/2022 9:03	9:03 AM	46.3	127973.8556
82	8/30/2022 9:03	9:03 AM	47.2	157442.2381
83	8/30/2022 9:03	9:03 AM	43	59857.86945
84	8/30/2022 9:03	9:03 AM	39.7	27997.62902
85	8/30/2022 9:03	9:03 AM	41	37767.76235
86	8/30/2022 9:03	9:03 AM	41.7	44373.25165
87	8/30/2022 9:03	9:03 AM	42.7	55862.6141
88	8/30/2022 9:03	9:03 AM	41.7	44373.25165
89	8/30/2022 9:03	9:03 AM	40.6	34444.60864
90	8/30/2022 9:03	9:03 AM	40.4	32894.34588
91	8/30/2022 9:03	9:03 AM	41.2	39547.70216
92	8/30/2022 9:03	9:03 AM	41.4	41411.52794
93	8/30/2022 9:04	9:04 AM	41.3	40468.88648
94	8/30/2022 9:04	9:04 AM	39.4	26128.9077
95	8/30/2022 9:04	9:04 AM	41.8	45406.83745
96	8/30/2022 9:04	9:04 AM	41.8	45406.83745
97	8/30/2022 9:04	9:04 AM	41.8	45406.83745
98	8/30/2022 9:04	9:04 AM	42	47546.79577
99	8/30/2022 9:04	9:04 AM	42.7	55862.6141
100	8/30/2022 9:04	9:04 AM	43.3	64138.86269
101	8/30/2022 9:04	9:04 AM	43.9	73641.26747
102	8/30/2022 9:04	9:04 AM	47.1	153858.4152
103	8/30/2022 9:04	9:04 AM	52.5	533483.823
104	8/30/2022 9:04	9:04 AM	51.9	464644.9857
105	8/30/2022 9:04	9:04 AM	50.9	369080.6312
106	8/30/2022 9:04	9:04 AM	47.1	153858.4152
107	8/30/2022 9:04	9:04 AM	51.8	454068.3745
108	8/30/2022 9:04	9:04 AM	51.1	386474.8655
109	8/30/2022 9:04	9:04 AM	50.8	360679.3304
110	8/30/2022 9:04	9:04 AM	48	189287.2033

111	8/30/2022 9:04	9:04 AM	44	75356.59295
112	8/30/2022 9:04	9:04 AM	44.2	78908.03976
113	8/30/2022 9:05	9:05 AM	43.5	67161.63416
114	8/30/2022 9:05	9:05 AM	43.3	64138.86269
115	8/30/2022 9:05	9:05 AM	47.6	172631.9812
116	8/30/2022 9:05	9:05 AM	48.1	193696.2687
117	8/30/2022 9:05	9:05 AM	44	75356.59295
118	8/30/2022 9:05	9:05 AM	43.2	62678.88393
119	8/30/2022 9:05	9:05 AM	44.2	78908.03976
120	8/30/2022 9:05	9:05 AM	41.9	46464.49857
121	8/30/2022 9:05	9:05 AM	45.2	99339.33644
122	8/30/2022 9:05	9:05 AM	45.8	114056.8189
123	8/30/2022 9:05	9:05 AM	47.1	153858.4152
124	8/30/2022 9:05	9:05 AM	52.2	497876.0722
125	8/30/2022 9:05	9:05 AM	46	119432.1512
126	8/30/2022 9:05	9:05 AM	46	119432.1512
127	8/30/2022 9:05	9:05 AM	44.3	80746.04412
128	8/30/2022 9:05	9:05 AM	45.3	101653.2468
129	8/30/2022 9:05	9:05 AM	46.5	134005.0776
130	8/30/2022 9:05	9:05 AM	42.6	54591.02576
131	8/30/2022 9:05	9:05 AM	44.3	80746.04412
132	8/30/2022 9:05	9:05 AM	45	94868.32981
133	8/30/2022 9:06	9:06 AM	42.4	52134.02486
134	8/30/2022 9:06	9:06 AM	54.9	927088.6298
135	8/30/2022 9:06	9:06 AM	57.1	1538584.152
136	8/30/2022 9:06	9:06 AM	56.9	1469336.458
137	8/30/2022 9:06	9:06 AM	55.6	1089234.164
138	8/30/2022 9:06	9:06 AM	55.9	1167135.435
139	8/30/2022 9:06	9:06 AM	55.8	1140568.189
140	8/30/2022 9:06	9:06 AM	53.3	641388.6269
141	8/30/2022 9:06	9:06 AM	44.9	92708.86298
142	8/30/2022 9:06	9:06 AM	41	37767.76235
143	8/30/2022 9:06	9:06 AM	41.7	44373.25165
144	8/30/2022 9:06	9:06 AM	42.5	53348.3823
145	8/30/2022 9:06	9:06 AM	43.6	68726.02958
146	8/30/2022 9:06	9:06 AM	43.1	61252.13834
147	8/30/2022 9:06	9:06 AM	44.3	80746.04412
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149	8/30/2022 9:06	9:06 AM	49.4	261289.077
150	8/30/2022 9:06	9:06 AM	45.9	116713.5435
151	8/30/2022 9:06	9:06 AM	45.6	108923.4164
152	8/30/2022 9:06	9:06 AM	44.6	86520.94509
153	8/30/2022 9:07	9:07 AM	46.1	122214.0833
154	8/30/2022 9:07	9:07 AM	49.1	243849.1548
155	8/30/2022 9:07	9:07 AM	47.6	172631.9812
156	8/30/2022 9:07	9:07 AM	45.6	108923.4164
157	8/30/2022 9:07	9:07 AM	45.5	106444.0168
158	8/30/2022 9:07	9:07 AM	46.9	146933.6458
159	8/30/2022 9:07	9:07 AM	44.4	82626.8611
160	8/30/2022 9:07	9:07 AM	48.2	198208.0344
161	8/30/2022 9:07	9:07 AM	47.1	153858.4152
162	8/30/2022 9:07	9:07 AM	48.9	232874.135
163	8/30/2022 9:07	9:07 AM	44.7	88536.2768
164	8/30/2022 9:07	9:07 AM	47.6	172631.9812
165	8/30/2022 9:07	9:07 AM	45.9	116713.5435
166	8/30/2022 9:07	9:07 AM	47.4	164862.2622
167	8/30/2022 9:07	9:07 AM	46	119432.1512
168	8/30/2022 9:07	9:07 AM	45.3	101653.2468
169	8/30/2022 9:07	9:07 AM	46.2	125060.815
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171	8/30/2022 9:07	9:07 AM	42	47546.79577
172	8/30/2022 9:07	9:07 AM	43.9	73641.26747
173	8/30/2022 9:08	9:08 AM	43.6	68726.02958
174	8/30/2022 9:08	9:08 AM	43.7	70326.86446

175	8/30/2022 9:08	9:08 AM	41.8	45406.83745
176	8/30/2022 9:08	9:08 AM	40.8	36067.93304
177	8/30/2022 9:08	9:08 AM	40.7	35246.92665
178	8/30/2022 9:08	9:08 AM	40.6	34444.60864
179	8/30/2022 9:08	9:08 AM	40.9	36908.06312
180	8/30/2022 9:08	9:08 AM	41.4	41411.52794
181	8/30/2022 9:08	9:08 AM	41	37767.76235
182	8/30/2022 9:08	9:08 AM	42.4	52134.02486
183	8/30/2022 9:08	9:08 AM	44.8	90598.55161
184	8/30/2022 9:08	9:08 AM	42.5	53348.3823
185	8/30/2022 9:08	9:08 AM	40.6	34444.60864
186	8/30/2022 9:08	9:08 AM	45.9	116713.5435
187	8/30/2022 9:08	9:08 AM	45.9	116713.5435
188	8/30/2022 9:08	9:08 AM	44.6	86520.94509
189	8/30/2022 9:08	9:08 AM	43.5	67161.63416
190	8/30/2022 9:08	9:08 AM	42.2	49787.60722
191	8/30/2022 9:08	9:08 AM	42.1	48654.30292
192	8/30/2022 9:08	9:08 AM	43	59857.86945
193	8/30/2022 9:09	9:09 AM	45.1	97078.09708
194	8/30/2022 9:09	9:09 AM	45.8	114056.8189
195	8/30/2022 9:09	9:09 AM	45.7	111460.5687
196	8/30/2022 9:09	9:09 AM	46	119432.1512
197	8/30/2022 9:09	9:09 AM	45.5	106444.0168
198	8/30/2022 9:09	9:09 AM	45	94868.32981
199	8/30/2022 9:09	9:09 AM	46.6	137126.4569
200	8/30/2022 9:09	9:09 AM	45.6	108923.4164
201	8/30/2022 9:09	9:09 AM	49.3	255341.4115
202	8/30/2022 9:09	9:09 AM	48.5	212383.7353
203	8/30/2022 9:09	9:09 AM	45.4	104021.0551
204	8/30/2022 9:09	9:09 AM	43.7	70326.86446
205	8/30/2022 9:09	9:09 AM	41.9	46464.49857
206	8/30/2022 9:09	9:09 AM	44.7	88536.2768
207	8/30/2022 9:09	9:09 AM	43	59857.86945
208	8/30/2022 9:09	9:09 AM	41.2	39547.70216
209	8/30/2022 9:09	9:09 AM	44.7	88536.2768
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211	8/30/2022 9:09	9:09 AM	43.8	71964.98757
212	8/30/2022 9:09	9:09 AM	45.5	106444.0168
213	8/30/2022 9:10	9:10 AM	45.6	108923.4164
214	8/30/2022 9:10	9:10 AM	44.4	82626.8611
215	8/30/2022 9:10	9:10 AM	43.8	71964.98757
216	8/30/2022 9:10	9:10 AM	43.1	61252.13834
217	8/30/2022 9:10	9:10 AM	43.9	73641.26747
218	8/30/2022 9:10	9:10 AM	45.8	114056.8189
219	8/30/2022 9:10	9:10 AM	47.8	180767.8758
220	8/30/2022 9:10	9:10 AM	46.1	122214.0833
221	8/30/2022 9:10	9:10 AM	44.8	90598.55161
222	8/30/2022 9:10	9:10 AM	44.6	86520.94509
223	8/30/2022 9:10	9:10 AM	45.2	99339.33644
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226	8/30/2022 9:10	9:10 AM	44	75356.59295
227	8/30/2022 9:10	9:10 AM	44.2	78908.03976
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231	8/30/2022 9:10	9:10 AM	45.8	114056.8189
232	8/30/2022 9:10	9:10 AM	45.2	99339.33644
233	8/30/2022 9:11	9:11 AM	44.2	78908.03976
234	8/30/2022 9:11	9:11 AM	43.7	70326.86446
235	8/30/2022 9:11	9:11 AM	45.3	101653.2468
236	8/30/2022 9:11	9:11 AM	45.6	108923.4164
237	8/30/2022 9:11	9:11 AM	44.1	77111.87348
238	8/30/2022 9:11	9:11 AM	42.7	55862.6141

239	8/30/2022 9:11	9:11 AM	43.9	73641.26747
240	8/30/2022 9:11	9:11 AM	44.6	86520.94509
241	8/30/2022 9:11	9:11 AM	40.3	32145.57916
242	8/30/2022 9:11	9:11 AM	40.5	33660.55363
243	8/30/2022 9:11	9:11 AM	42	47546.79577
244	8/30/2022 9:11	9:11 AM	42.6	54591.02576
245	8/30/2022 9:11	9:11 AM	41.3	40468.88648
246	8/30/2022 9:11	9:11 AM	40.5	33660.55363
247	8/30/2022 9:11	9:11 AM	44.8	90598.55161
248	8/30/2022 9:11	9:11 AM	42.6	54591.02576
249	8/30/2022 9:11	9:11 AM	43.3	64138.86269
250	8/30/2022 9:11	9:11 AM	41.5	42376.12634
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257	8/30/2022 9:12	9:12 AM	43.1	61252.13834
258	8/30/2022 9:12	9:12 AM	42	47546.79577
259	8/30/2022 9:12	9:12 AM	43	59857.86945
260	8/30/2022 9:12	9:12 AM	47.3	161109.5389
261	8/30/2022 9:12	9:12 AM	45.9	116713.5435
262	8/30/2022 9:12	9:12 AM	45.5	106444.0168
263	8/30/2022 9:12	9:12 AM	47.6	172631.9812
264	8/30/2022 9:12	9:12 AM	45.6	108923.4164
265	8/30/2022 9:12	9:12 AM	42.9	58495.33799
266	8/30/2022 9:12	9:12 AM	43.4	65632.84872
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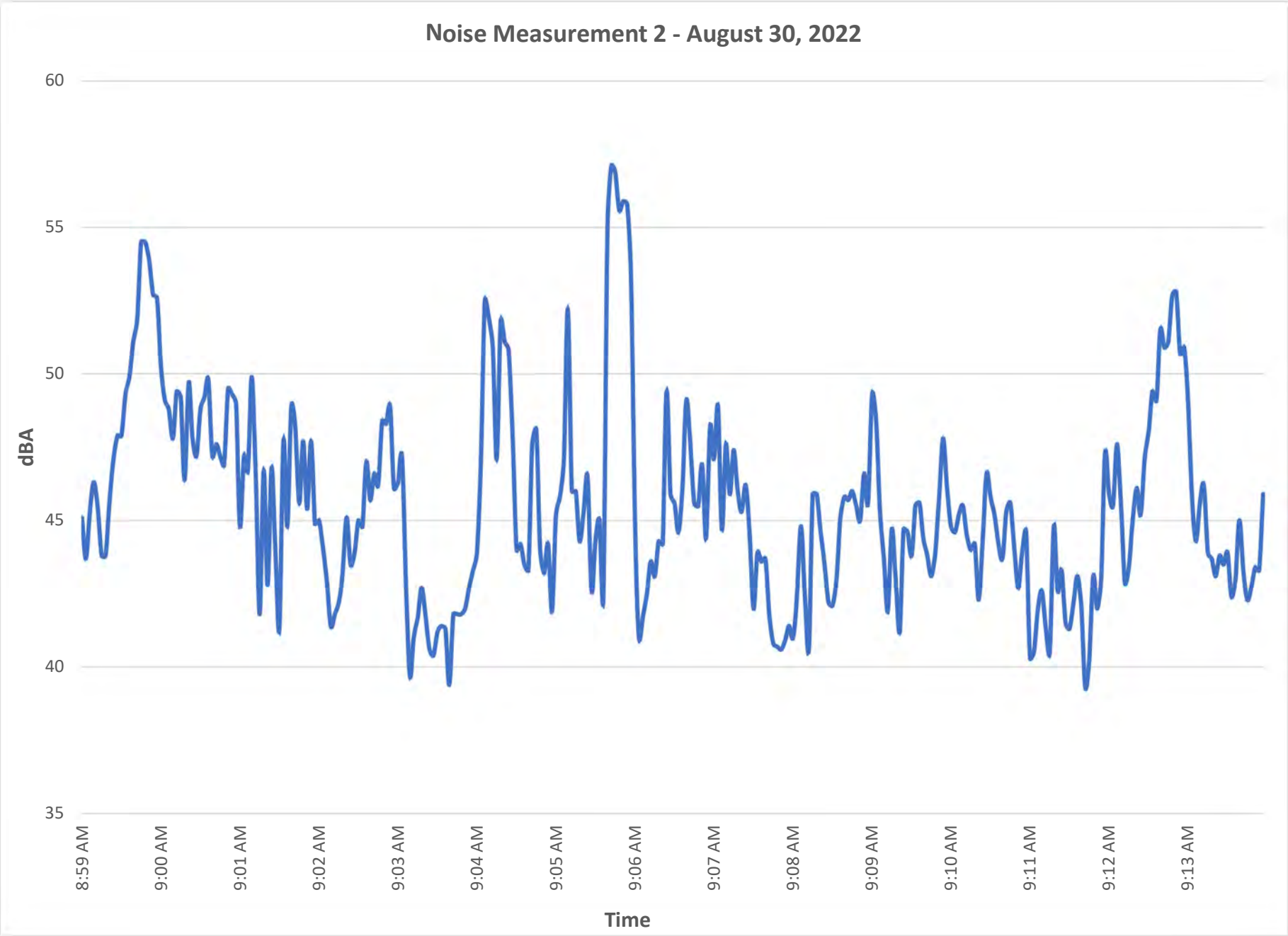
269	8/30/2022 9:12	9:12 AM	45.2	99339.33644
270	8/30/2022 9:12	9:12 AM	47.1	153858.4152
271	8/30/2022 9:12	9:12 AM	48	189287.2033
272	8/30/2022 9:12	9:12 AM	49.4	261289.077
273	8/30/2022 9:13	9:13 AM	49.1	243849.1548
274	8/30/2022 9:13	9:13 AM	51.5	423761.2634
275	8/30/2022 9:13	9:13 AM	50.9	369080.6312
276	8/30/2022 9:13	9:13 AM	51.1	386474.8655
277	8/30/2022 9:13	9:13 AM	52.7	558626.141
278	8/30/2022 9:13	9:13 AM	52.8	571638.2154
279	8/30/2022 9:13	9:13 AM	50.7	352469.2665
280	8/30/2022 9:13	9:13 AM	50.9	369080.6312
281	8/30/2022 9:13	9:13 AM	49.1	243849.1548
282	8/30/2022 9:13	9:13 AM	45.8	114056.8189
283	8/30/2022 9:13	9:13 AM	44.3	80746.04412
284	8/30/2022 9:13	9:13 AM	45.6	108923.4164
285	8/30/2022 9:13	9:13 AM	46.2	125060.815
286	8/30/2022 9:13	9:13 AM	43.9	73641.26747
287	8/30/2022 9:13	9:13 AM	43.7	70326.86446
288	8/30/2022 9:13	9:13 AM	43.1	61252.13834
289	8/30/2022 9:13	9:13 AM	43.8	71964.98757
290	8/30/2022 9:13	9:13 AM	43.5	67161.63416
291	8/30/2022 9:13	9:13 AM	43.9	73641.26747
292	8/30/2022 9:13	9:13 AM	42.4	52134.02486
293	8/30/2022 9:14	9:14 AM	43	59857.86945
294	8/30/2022 9:14	9:14 AM	45	94868.32981
295	8/30/2022 9:14	9:14 AM	43.3	64138.86269
296	8/30/2022 9:14	9:14 AM	42.3	50947.30957
297	8/30/2022 9:14	9:14 AM	42.7	55862.6141
298	8/30/2022 9:14	9:14 AM	43.4	65632.84872
299	8/30/2022 9:14	9:14 AM	43.3	64138.86269
300	8/30/2022 9:14	9:14 AM	45.9	116713.5435


Noise Measurement 2 - August 30, 2022
60
55
50
45
40
35
dBA
8:59 AM
9:00 AM
9:01 AM
9:02 AM
9:03 AM
9:04 AM
9:05 AM
9:06 AM
9:07 AM
9:08 AM
9:09 AM
9:10 AM
9:11 AM
9:12 AM
9:13 AM
Time

Noise Measurement 3 - 32017 Coast Highway

Data Logger 2		
Duration (seconds)		3
Weighting	A	
Response	SLOW	
Range	40-100	
L05		77.7
L10		76.6
L50		68.8
L90		59.4
L95		54.5
Lmax		83.2
Time	8/30/2022	9:25
SEL		99.5
Leq		**72.5**

Noise Level Graph Inputs		
Start	0.39133	
End	0.40171	
Interval	0:01:00	0.000694

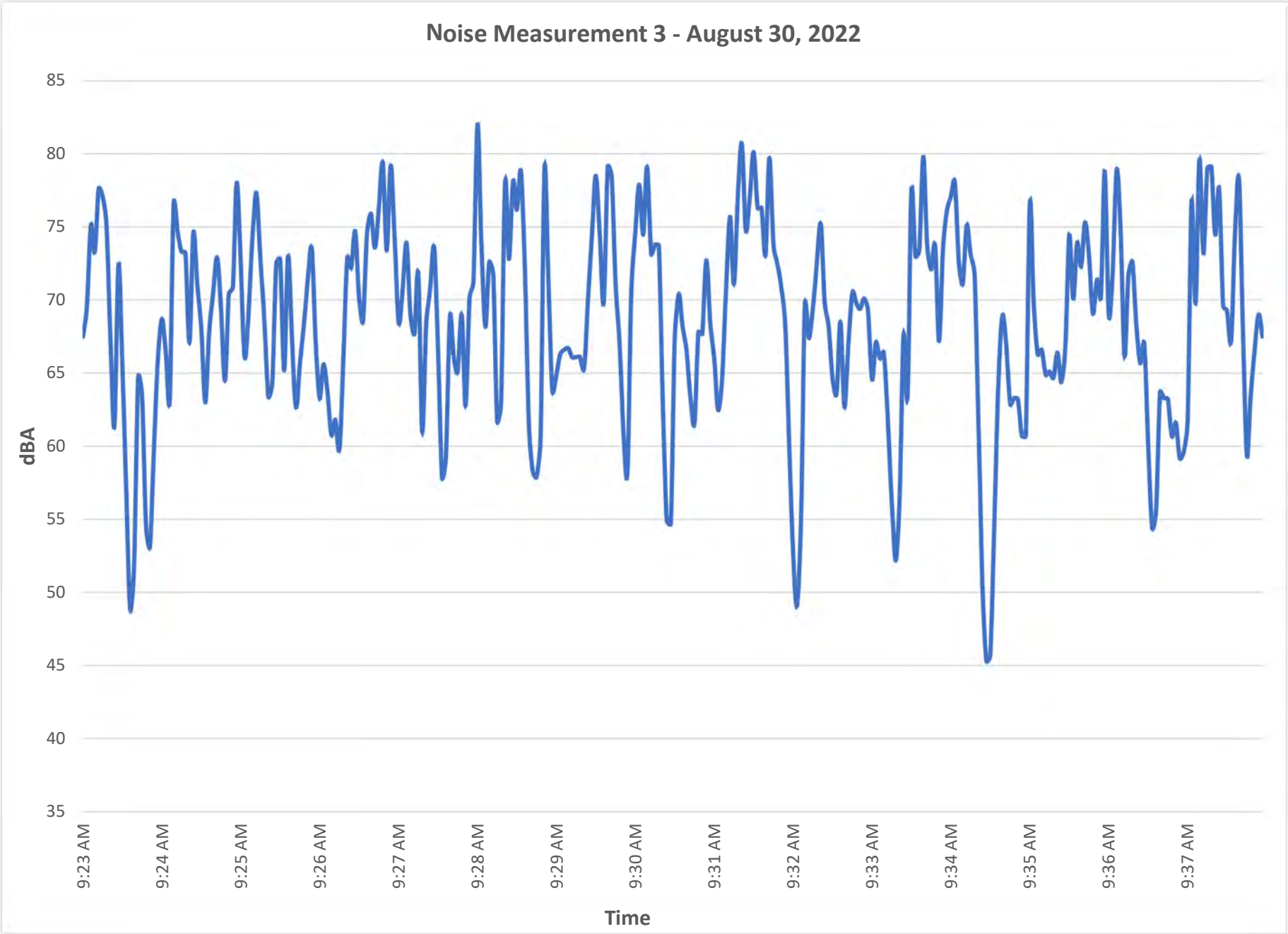
No.s	Date Time	Time	dB	Sound Energy
1	8/30/2022 9:23	9:23 AM	67.5	16870239.76
2	8/30/2022 9:23	9:23 AM	69.5	26737528.14
3	8/30/2022 9:23	9:23 AM	75.1	97078097.08
4	8/30/2022 9:23	9:23 AM	73.3	64138862.69
5	8/30/2022 9:23	9:23 AM	77.6	172631981.2
6	8/30/2022 9:23	9:23 AM	77.1	153858415.2
7	8/30/2022 9:23	9:23 AM	75.1	97078097.08
8	8/30/2022 9:23	9:23 AM	67.1	15385841.52
9	8/30/2022 9:23	9:23 AM	61.4	4141152.794
10	8/30/2022 9:23	9:23 AM	72.4	52134024.86
11	8/30/2022 9:24	9:24 AM	65.6	10892341.64
12	8/30/2022 9:24	9:24 AM	56.7	1403205.424
13	8/30/2022 9:24	9:24 AM	48.8	227573.2725
14	8/30/2022 9:24	9:24 AM	51.9	464644.9857
15	8/30/2022 9:24	9:24 AM	64.7	8853627.68
16	8/30/2022 9:24	9:24 AM	63.5	6716163.416
17	8/30/2022 9:24	9:24 AM	54.5	845514.8794
18	8/30/2022 9:24	9:24 AM	53.1	612521.3834
19	8/30/2022 9:24	9:24 AM	59.9	2931711.663
20	8/30/2022 9:24	9:24 AM	65.9	11671354.35
21	8/30/2022 9:24	9:24 AM	68.7	22239307.24
22	8/30/2022 9:24	9:24 AM	66.5	13400507.76
23	8/30/2022 9:24	9:24 AM	63.2	6267888.393
24	8/30/2022 9:24	9:24 AM	76.6	137126456.9
25	8/30/2022 9:24	9:24 AM	74.7	88536276.8
26	8/30/2022 9:24	9:24 AM	73.3	64138862.69
27	8/30/2022 9:24	9:24 AM	73.2	62678883.93
28	8/30/2022 9:24	9:24 AM	67.1	15385841.52
29	8/30/2022 9:24	9:24 AM	74.6	86520945.09
30	8/30/2022 9:24	9:24 AM	71	37767762.35
31	8/30/2022 9:25	9:25 AM	68.1	19369626.87
32	8/30/2022 9:25	9:25 AM	63	5985786.945
33	8/30/2022 9:25	9:25 AM	67.8	18076787.58
34	8/30/2022 9:25	9:25 AM	70.5	33660553.63
35	8/30/2022 9:25	9:25 AM	72.9	58495337.99
36	8/30/2022 9:25	9:25 AM	69.5	26737528.14
37	8/30/2022 9:25	9:25 AM	64.5	8455148.794
38	8/30/2022 9:25	9:25 AM	70.4	32894345.88
39	8/30/2022 9:25	9:25 AM	70.9	36908063.12
40	8/30/2022 9:25	9:25 AM	78	189287203.3
41	8/30/2022 9:25	9:25 AM	72.5	53348382.3
42	8/30/2022 9:25	9:25 AM	66.1	12221408.33
43	8/30/2022 9:25	9:25 AM	69.3	25534141.15
44	8/30/2022 9:25	9:25 AM	74.4	82626861.1
45	8/30/2022 9:25	9:25 AM	77.3	161109538.9
46	8/30/2022 9:25	9:25 AM	72.7	55862614.1

47	8/30/2022 9:25	9:25 AM	68.6	21733078.8
48	8/30/2022 9:25	9:25 AM	63.4	6563284.872
49	8/30/2022 9:25	9:25 AM	64.3	8074604.412
50	8/30/2022 9:25	9:25 AM	72.5	53348382.3
51	8/30/2022 9:26	9:26 AM	72.8	57163821.54
52	8/30/2022 9:26	9:26 AM	65.2	9933933.644
53	8/30/2022 9:26	9:26 AM	73	59857869.45
54	8/30/2022 9:26	9:26 AM	67.2	15744223.81
55	8/30/2022 9:26	9:26 AM	62.7	5586261.41
56	8/30/2022 9:26	9:26 AM	65.6	10892341.64
57	8/30/2022 9:26	9:26 AM	68.3	20282489.26
58	8/30/2022 9:26	9:26 AM	71.4	41411527.94
59	8/30/2022 9:26	9:26 AM	73.5	67161634.16
60	8/30/2022 9:26	9:26 AM	67.2	15744223.81
61	8/30/2022 9:26	9:26 AM	63.3	6413886.269
62	8/30/2022 9:26	9:26 AM	65.6	10892341.64
63	8/30/2022 9:26	9:26 AM	63.6	6872602.958
64	8/30/2022 9:26	9:26 AM	60.8	3606793.304
65	8/30/2022 9:26	9:26 AM	61.8	4540683.745
66	8/30/2022 9:26	9:26 AM	59.8	2864977.758
67	8/30/2022 9:26	9:26 AM	65.8	11405681.89
68	8/30/2022 9:26	9:26 AM	72.9	58495337.99
69	8/30/2022 9:26	9:26 AM	72.2	49787607.22
70	8/30/2022 9:26	9:26 AM	74.7	88536276.8
71	8/30/2022 9:27	9:27 AM	70.2	31413856.44
72	8/30/2022 9:27	9:27 AM	68.6	21733078.8
73	8/30/2022 9:27	9:27 AM	74.5	84551487.94
74	8/30/2022 9:27	9:27 AM	75.9	116713543.5
75	8/30/2022 9:27	9:27 AM	73.6	68726029.58
76	8/30/2022 9:27	9:27 AM	76.2	125060815
77	8/30/2022 9:27	9:27 AM	79.4	261289077
78	8/30/2022 9:27	9:27 AM	73.4	65632848.72
79	8/30/2022 9:27	9:27 AM	79.2	249529131.3
80	8/30/2022 9:27	9:27 AM	74.4	82626861.1
81	8/30/2022 9:27	9:27 AM	68.5	21238373.53
82	8/30/2022 9:27	9:27 AM	70.6	34444608.64
83	8/30/2022 9:27	9:27 AM	73.9	73641267.47
84	8/30/2022 9:27	9:27 AM	69.1	24384915.48
85	8/30/2022 9:27	9:27 AM	67.7	17665309.66
86	8/30/2022 9:27	9:27 AM	71.8	45406837.45
87	8/30/2022 9:27	9:27 AM	61	3776776.235
88	8/30/2022 9:27	9:27 AM	68.3	20282489.26
89	8/30/2022 9:27	9:27 AM	70.7	35246926.65
90	8/30/2022 9:27	9:27 AM	73.6	68726029.58
91	8/30/2022 9:28	9:28 AM	66.8	14358902.77
92	8/30/2022 9:28	9:28 AM	57.9	1849785.006
93	8/30/2022 9:28	9:28 AM	59.2	2495291.313
94	8/30/2022 9:28	9:28 AM	68.8	22757327.25
95	8/30/2022 9:28	9:28 AM	66.1	12221408.33
96	8/30/2022 9:28	9:28 AM	65.1	9707809.708
97	8/30/2022 9:28	9:28 AM	69	23829847.04
98	8/30/2022 9:28	9:28 AM	62.8	5716382.154
99	8/30/2022 9:28	9:28 AM	70.2	31413856.44
100	8/30/2022 9:28	9:28 AM	71.3	40468886.48
101	8/30/2022 9:28	9:28 AM	82	475467957.7
102	8/30/2022 9:28	9:28 AM	73.9	73641267.47
103	8/30/2022 9:28	9:28 AM	68.2	19820803.44
104	8/30/2022 9:28	9:28 AM	72.6	54591025.76
105	8/30/2022 9:28	9:28 AM	71.7	44373251.65
106	8/30/2022 9:28	9:28 AM	61.7	4437325.165
107	8/30/2022 9:28	9:28 AM	62.9	5849533.799
108	8/30/2022 9:28	9:28 AM	78	189287203.3
109	8/30/2022 9:28	9:28 AM	72.8	57163821.54
110	8/30/2022 9:28	9:28 AM	78.1	193696268.7

111	8/30/2022 9:29	9:29 AM	76.2	125060815
112	8/30/2022 9:29	9:29 AM	78.8	227573272.5
113	8/30/2022 9:29	9:29 AM	72.4	52134024.86
114	8/30/2022 9:29	9:29 AM	61.6	4336319.312
115	8/30/2022 9:29	9:29 AM	58.3	2028248.926
116	8/30/2022 9:29	9:29 AM	57.9	1849785.006
117	8/30/2022 9:29	9:29 AM	60.7	3524692.665
118	8/30/2022 9:29	9:29 AM	79	238298470.4
119	8/30/2022 9:29	9:29 AM	71.1	38647486.55
120	8/30/2022 9:29	9:29 AM	63.8	7196498.757
121	8/30/2022 9:29	9:29 AM	64.9	9270886.298
122	8/30/2022 9:29	9:29 AM	66.3	12797385.56
123	8/30/2022 9:29	9:29 AM	66.6	13712645.69
124	8/30/2022 9:29	9:29 AM	66.7	14032054.24
125	8/30/2022 9:29	9:29 AM	66.1	12221408.33
126	8/30/2022 9:29	9:29 AM	66.1	12221408.33
127	8/30/2022 9:29	9:29 AM	66.1	12221408.33
128	8/30/2022 9:29	9:29 AM	65.3	10165324.68
129	8/30/2022 9:29	9:29 AM	69.9	29317116.63
130	8/30/2022 9:29	9:29 AM	74.4	82626861.1
131	8/30/2022 9:30	9:30 AM	78.5	212383735.3
132	8/30/2022 9:30	9:30 AM	74.4	82626861.1
133	8/30/2022 9:30	9:30 AM	69.8	28649777.58
134	8/30/2022 9:30	9:30 AM	79.1	243849154.8
135	8/30/2022 9:30	9:30 AM	78.5	212383735.3
136	8/30/2022 9:30	9:30 AM	71.3	40468886.48
137	8/30/2022 9:30	9:30 AM	67.1	15385841.52
138	8/30/2022 9:30	9:30 AM	61.1	3864748.655
139	8/30/2022 9:30	9:30 AM	58.2	1982080.344
140	8/30/2022 9:30	9:30 AM	70.5	33660553.63
141	8/30/2022 9:30	9:30 AM	74.6	86520945.09
142	8/30/2022 9:30	9:30 AM	77.9	184978500.6
143	8/30/2022 9:30	9:30 AM	74.5	84551487.94
144	8/30/2022 9:30	9:30 AM	79.1	243849154.8
145	8/30/2022 9:30	9:30 AM	73.2	62678883.93
146	8/30/2022 9:30	9:30 AM	73.8	71964987.57
147	8/30/2022 9:30	9:30 AM	73.7	70326864.46
148	8/30/2022 9:30	9:30 AM	62.7	5586261.41
149	8/30/2022 9:30	9:30 AM	54.9	927088.6298
150	8/30/2022 9:30	9:30 AM	54.7	885362.768
151	8/30/2022 9:31	9:31 AM	67.2	15744223.81
152	8/30/2022 9:31	9:31 AM	70.4	32894345.88
153	8/30/2022 9:31	9:31 AM	68.2	19820803.44
154	8/30/2022 9:31	9:31 AM	66.5	13400507.76
155	8/30/2022 9:31	9:31 AM	63.3	6413886.269
156	8/30/2022 9:31	9:31 AM	61.6	4336319.312
157	8/30/2022 9:31	9:31 AM	67.8	18076787.58
158	8/30/2022 9:31	9:31 AM	67.7	17665309.66
159	8/30/2022 9:31	9:31 AM	72.7	55862614.1
160	8/30/2022 9:31	9:31 AM	68.5	21238373.53
161	8/30/2022 9:31	9:31 AM	66	11943215.12
162	8/30/2022 9:31	9:31 AM	62.5	5334838.23
163	8/30/2022 9:31	9:31 AM	64.6	8652094.509
164	8/30/2022 9:31	9:31 AM	70.6	34444608.64
165	8/30/2022 9:31	9:31 AM	75.7	111460568.7
166	8/30/2022 9:31	9:31 AM	71.1	38647486.55
167	8/30/2022 9:31	9:31 AM	77	150356170.1
168	8/30/2022 9:31	9:31 AM	80.7	352469266.5
169	8/30/2022 9:31	9:31 AM	74.8	90598551.61
170	8/30/2022 9:31	9:31 AM	77	150356170.1
171	8/30/2022 9:32	9:32 AM	80.1	306987897.7
172	8/30/2022 9:32	9:32 AM	76.3	127973855.6
173	8/30/2022 9:32	9:32 AM	76.3	127973855.6
174	8/30/2022 9:32	9:32 AM	73.1	61252138.34

175	8/30/2022 9:32	9:32 AM	79.7	279976290.2
176	8/30/2022 9:32	9:32 AM	73.8	71964987.57
177	8/30/2022 9:32	9:32 AM	72.5	53348382.3
178	8/30/2022 9:32	9:32 AM	70.9	36908063.12
179	8/30/2022 9:32	9:32 AM	68.3	20282489.26
180	8/30/2022 9:32	9:32 AM	60.3	3214557.916
181	8/30/2022 9:32	9:32 AM	52.7	558626.141
182	8/30/2022 9:32	9:32 AM	49.1	243849.1548
183	8/30/2022 9:32	9:32 AM	55.1	970780.9708
184	8/30/2022 9:32	9:32 AM	69.7	27997629.02
185	8/30/2022 9:32	9:32 AM	67.4	16486226.22
186	8/30/2022 9:32	9:32 AM	69.4	26128907.7
187	8/30/2022 9:32	9:32 AM	72.4	52134024.86
188	8/30/2022 9:32	9:32 AM	75.2	99339336.44
189	8/30/2022 9:32	9:32 AM	69.9	29317116.63
190	8/30/2022 9:32	9:32 AM	68.2	19820803.44
191	8/30/2022 9:33	9:33 AM	64.7	8853627.68
192	8/30/2022 9:33	9:33 AM	63.6	6872602.958
193	8/30/2022 9:33	9:33 AM	68.5	21238373.53
194	8/30/2022 9:33	9:33 AM	62.7	5586261.41
195	8/30/2022 9:33	9:33 AM	66.9	14693364.58
196	8/30/2022 9:33	9:33 AM	70.5	33660553.63
197	8/30/2022 9:33	9:33 AM	69.8	28649777.58
198	8/30/2022 9:33	9:33 AM	69.4	26128907.7
199	8/30/2022 9:33	9:33 AM	70.1	30698789.77
200	8/30/2022 9:33	9:33 AM	69.3	25534141.15
201	8/30/2022 9:33	9:33 AM	64.6	8652094.509
202	8/30/2022 9:33	9:33 AM	67.1	15385841.52
203	8/30/2022 9:33	9:33 AM	66	11943215.12
204	8/30/2022 9:33	9:33 AM	66.4	13095474.97
205	8/30/2022 9:33	9:33 AM	61.8	4540683.745
206	8/30/2022 9:33	9:33 AM	56.3	1279738.556
207	8/30/2022 9:33	9:33 AM	52.2	497876.0722
208	8/30/2022 9:33	9:33 AM	56.5	1340050.776
209	8/30/2022 9:33	9:33 AM	67.6	17263198.12
210	8/30/2022 9:33	9:33 AM	63.4	6563284.872
211	8/30/2022 9:34	9:34 AM	77.4	164862262.2
212	8/30/2022 9:34	9:34 AM	73	59857869.45
213	8/30/2022 9:34	9:34 AM	73.4	65632848.72
214	8/30/2022 9:34	9:34 AM	79.8	286497775.8
215	8/30/2022 9:34	9:34 AM	73.7	70326864.46
216	8/30/2022 9:34	9:34 AM	72.1	48654302.92
217	8/30/2022 9:34	9:34 AM	73.7	70326864.46
218	8/30/2022 9:34	9:34 AM	67.2	15744223.81
219	8/30/2022 9:34	9:34 AM	73.5	67161634.16
220	8/30/2022 9:34	9:34 AM	76.1	122214083.3
221	8/30/2022 9:34	9:34 AM	77.1	153858415.2
222	8/30/2022 9:34	9:34 AM	78.1	193696268.7
223	8/30/2022 9:34	9:34 AM	72.6	54591025.76
224	8/30/2022 9:34	9:34 AM	71.1	38647486.55
225	8/30/2022 9:34	9:34 AM	75.1	97078097.08
226	8/30/2022 9:34	9:34 AM	73.1	61252138.34
227	8/30/2022 9:34	9:34 AM	71.7	44373251.65
228	8/30/2022 9:34	9:34 AM	61.4	4141152.794
229	8/30/2022 9:34	9:34 AM	50.6	344446.0864
230	8/30/2022 9:34	9:34 AM	45.3	101653.2468
231	8/30/2022 9:35	9:35 AM	45.7	111460.5687
232	8/30/2022 9:35	9:35 AM	54.8	905985.5161
233	8/30/2022 9:35	9:35 AM	64	7535659.295
234	8/30/2022 9:35	9:35 AM	68.9	23287413.5
235	8/30/2022 9:35	9:35 AM	67	15035617.01
236	8/30/2022 9:35	9:35 AM	62.9	5849533.799
237	8/30/2022 9:35	9:35 AM	63.3	6413886.269
238	8/30/2022 9:35	9:35 AM	63.2	6267888.393

239	8/30/2022 9:35	9:35 AM	60.7	3524692.665
240	8/30/2022 9:35	9:35 AM	60.7	3524692.665
241	8/30/2022 9:35	9:35 AM	76.6	137126456.9
242	8/30/2022 9:35	9:35 AM	69.8	28649777.58
243	8/30/2022 9:35	9:35 AM	66.3	12797385.56
244	8/30/2022 9:35	9:35 AM	66.6	13712645.69
245	8/30/2022 9:35	9:35 AM	64.9	9270886.298
246	8/30/2022 9:35	9:35 AM	65.1	9707809.708
247	8/30/2022 9:35	9:35 AM	64.7	8853627.68
248	8/30/2022 9:35	9:35 AM	66.4	13095474.97
249	8/30/2022 9:35	9:35 AM	64.4	8262686.11
250	8/30/2022 9:35	9:35 AM	66.8	14358902.77
251	8/30/2022 9:36	9:36 AM	74.4	82626861.1
252	8/30/2022 9:36	9:36 AM	70.1	30698789.77
253	8/30/2022 9:36	9:36 AM	73.9	73641267.47
254	8/30/2022 9:36	9:36 AM	72.3	50947309.57
255	8/30/2022 9:36	9:36 AM	75.3	101653246.8
256	8/30/2022 9:36	9:36 AM	73	59857869.45
257	8/30/2022 9:36	9:36 AM	69.1	24384915.48
258	8/30/2022 9:36	9:36 AM	71.4	41411527.94
259	8/30/2022 9:36	9:36 AM	70.2	31413856.44
260	8/30/2022 9:36	9:36 AM	78.8	227573272.5
261	8/30/2022 9:36	9:36 AM	69	23829847.04
262	8/30/2022 9:36	9:36 AM	71.8	45406837.45
263	8/30/2022 9:36	9:36 AM	78.9	232874135
264	8/30/2022 9:36	9:36 AM	74.9	92708862.98
265	8/30/2022 9:36	9:36 AM	66.2	12506081.5
266	8/30/2022 9:36	9:36 AM	71.7	44373251.65
267	8/30/2022 9:36	9:36 AM	72.6	54591025.76
268	8/30/2022 9:36	9:36 AM	68.3	20282489.26
269	8/30/2022 9:36	9:36 AM	65.7	11146056.87
270	8/30/2022 9:36	9:36 AM	67	15035617.01
271	8/30/2022 9:37	9:37 AM	60.2	3141385.644
272	8/30/2022 9:37	9:37 AM	54.4	826268.611
273	8/30/2022 9:37	9:37 AM	55.5	1064440.168
274	8/30/2022 9:37	9:37 AM	63.7	7032686.446
275	8/30/2022 9:37	9:37 AM	63.3	6413886.269
276	8/30/2022 9:37	9:37 AM	63.2	6267888.393
277	8/30/2022 9:37	9:37 AM	60.7	3524692.665
278	8/30/2022 9:37	9:37 AM	61.6	4336319.312
279	8/30/2022 9:37	9:37 AM	59.2	2495291.313
280	8/30/2022 9:37	9:37 AM	59.6	2736032.518
281	8/30/2022 9:37	9:37 AM	61.8	4540683.745
282	8/30/2022 9:37	9:37 AM	76.7	140320542.4
283	8/30/2022 9:37	9:37 AM	69.8	28649777.58
284	8/30/2022 9:37	9:37 AM	79.6	273603251.8
285	8/30/2022 9:37	9:37 AM	73.2	62678883.93
286	8/30/2022 9:37	9:37 AM	79	238298470.4
287	8/30/2022 9:37	9:37 AM	79.1	243849154.8
288	8/30/2022 9:37	9:37 AM	74.5	84551487.94
289	8/30/2022 9:37	9:37 AM	77.6	172631981.2
290	8/30/2022 9:37	9:37 AM	69.6	27360325.18
291	8/30/2022 9:38	9:38 AM	69.3	25534141.15
292	8/30/2022 9:38	9:38 AM	67.2	15744223.81
293	8/30/2022 9:38	9:38 AM	74.4	82626861.1
294	8/30/2022 9:38	9:38 AM	78.3	202824892.6
295	8/30/2022 9:38	9:38 AM	68.2	19820803.44
296	8/30/2022 9:38	9:38 AM	59.4	2612890.77
297	8/30/2022 9:38	9:38 AM	63.5	6716163.416
298	8/30/2022 9:38	9:38 AM	66.7	14032054.24
299	8/30/2022 9:38	9:38 AM	69	23829847.04
300	8/30/2022 9:38	9:38 AM	67.5	16870239.76


Noise Measurement 3 - August 30, 2022
85
80
75
70
65
60
55
50
45
40
35
dBA
9:23 AM
9:24 AM
9:25 AM
9:26 AM
9:27 AM
9:28 AM
9:29 AM
9:30 AM
9:31 AM
9:32 AM
9:33 AM
9:34 AM
9:35 AM
9:36 AM
9:37 AM
Time

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/20/2022
Case Descr 32051 Coast Highway

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
North of Si	Residential	60	50	50

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	80	0
Dozer	No	40		81.7	80	0
Backhoe	No	40		77.6	80	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	80.3	73.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	73.5	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.3	77.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
South of Si	Residential	60	50	50

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	25	0
Dozer	No	40		81.7	25	0
Backhoe	No	40		77.6	25	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	90.4	83.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	87.7	83.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	90.4	87.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
East of Site	Residential	60	50	50

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	270	0
Dozer	No	40		81.7	270	0
Backhoe	No	40		77.6	270	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	69.7	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.7	66.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Noise Attenuation and Contours

Input Variables

Point or Line Source	Point	
Hard or Soft Site	Hard	
Attenuation Rate	6	dBA/Doubling of Distance
(Choice: 3, 4.5, 6, or 7.5)		
Reference Noise Level	70	dBA
Reference Distance	3	feet

Note: Within 0-10 feet from the source, there is virtually no attenuation.

Noise Level at Receiver

Distance to Receiver		Noise Level	
50	ft	45.6	dBA
100	ft	39.5	dBA
150	ft	36.0	dBA
200	ft	33.5	dBA
400	ft	27.5	dBA
10	ft	59.5	dBA

Noise Contours

Noise Level Contour		Distance from Source	
80	dBA	1	ft
75	dBA	2	ft
70	dBA	3	ft
65	dBA	5	ft
60	dBA	9	ft
55	dBA	17	ft
50	dBA	30	ft
45	dBA	53	ft