

APPENDIX D
AIR QUALITY AND GREENHOUSE GAS EMISSION
CALCULATIONS

Santa Ana River Parkway Extension Project

Air Quality and Greenhouse Gas Emission Calculations

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Table 1: Regional Impact Summary - Peak Daily Criteria Pollutant Emissions (Construction)						
Peak Day	VOC	CO	NOx	SO2	PM10	PM2.5
Month 1	1.30	7.44	17.92	0.01	8.82	4.07
Month 2	4.22	23.74	62.99	0.04	28.18	13.23
Month 3	7.15	40.39	108.26	0.07	49.52	23.25
Month 4	11.31	67.35	161.78	0.12	67.10	31.95
Month 5	10.49	64.51	146.85	0.12	58.72	28.10
Month 6	7.22	47.29	86.51	0.11	26.95	13.36
Month 7	7.23	43.85	89.64	0.10	32.95	15.96
Month 8	4.51	28.62	54.57	0.07	9.94	5.35
Month 9	3.02	18.38	36.54	0.05	10.77	5.34
Month 10	2.56	14.54	31.38	0.04	10.56	5.14
Month 11	3.02	17.53	35.90	0.05	10.82	5.38
Month 12	2.27	13.45	26.27	0.04	0.90	0.87
Month 13	3.07	17.00	31.84	0.05	1.09	1.07
Month 14	3.40	18.54	35.24	0.06	1.27	1.24
Month 15	2.38	12.72	24.89	0.05	0.80	0.80
Month 16	1.73	9.31	18.42	0.03	0.59	0.59
Month 17	0.00	0.04	0.06	0.00	0.00	0.00
Month 18	41.72	0.00	0.00	0.00	0.00	0.00
Peak Daily Emissions ¹ =	41.72	67.35	161.78	0.12	67.10	31.95
SCAQMD Mass Daily Regional Thresholds (Construction)	75	550	100	150	150	55
Would the Proposed Project Exceed SCAQMD Mass Daily Regional Thresholds (Construction) (Y/N) ² ?	N	N	Y	N	N	N

Notes:
1. Values presented in "bold" represent emissions in excess of the SCAQMD's mass daily regional thresholds (construction).
2. Thresholds obtained from SCAQMD's website for CEQA significance thresholds and analysis (SCAQMD Air Quality Significance Thresholds, March 2011. Available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

Table 2: Localized Impact Summary - Peak Daily Onsite Criteria Pollutant Emissions Summary (Construction)								
Pollutant	Maximum Daily Onsite Emissions (lb/day)	Receptor Distance (m)	Allowable Emissions Interpolation ¹					Allowable Exceeded?
			Distance 1 (m)	Emissions 1 (lb/day)	Distance 2 (m)	Emissions 2 (lb/day)	Interpolated Emissions (lb/day) ²	
Trails and Trail Amenities³								
CO	44.62	7	0	522	25	522	522	No
NOx	103.38	7	0	103	25	103	103	Yes
PM10	49.40	7	0	4	25	4	4	Yes
PM2.5	0.00	7	0	3	25	3	3	No
Bridge #1⁴								
CO	8.75	121	100	1,014	200	1,975	1,216	No
NOx	18.83	121	100	121	200	159	129	No
PM10	5.99	121	100	24	200	53	30	No
PM2.5	0.00	121	100	9	200	20	11	No
Bridge #2⁴								
CO	8.75	866	500	6,531	500	6,531	6,531	No
NOx	18.83	866	500	252	500	252	252	No
PM10	5.99	866	500	137	500	137	137	No
PM2.5	0.00	866	500	74	500	74	74	No
Bridge #3⁴								
CO	8.75	30	25	522	50	685	555	No
NOx	18.83	30	25	103	50	104	103	No
PM10	5.99	30	25	4	50	10	5	Yes
PM2.5	0.00	30	25	3	50	4	3	No

Notes:
¹ Allowable emissions are from Appendix C to Final Localized Significance Methodology, SCAQMD, revised October 2009, downloaded from www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Based on source receptor area zone 16 (City of Yorba Linda).
² Interpolated emissions = Emissions 1 + (Receptor distance - Distance 1) x (Emissions 2 - Emissions 1) / (Distance 2 - Distance 1)
³ Closest sensitive receptor is located approximately 7.6 meters northwest of the western portions of the Proposed Riding and Hiking Trail and Proposed Class I Bikeway. Allowable emissions are for a 1-acre site
⁴ Closest sensitive receptor is located within 25 meters north of Bridge #3. The closest sensitive receptor to Bridge #1 and Bridge #2 are located approximately 121 meters and 866 meters northeast where construction activities would occur. Allowable emissions are for a 1-acre site.

Table 3: Greenhouse Gas Emission Summary		
Description	Value	Units
Total Project CO2 Emissions	2,599,640.29	lb CO2/project
Total Project CH4 Emissions	1,727.00	lb CH4/project
Total Project CH4 as CO2e Emissions	36,267.06	lb CH4 as CO2e/project
Total Project CO2e Emissions	2,635,907.35	lb CO2e/project
	1,196	MTCO2e/project
ized Project (Construction) CO2e Emissions	40	MTCO2e/Yr
AQMD GHG Threshold for Industrial Projects	10,000	MTCO2e/Yr
Would the Proposed Project Exceed the SCAQMD's GHG Threshold for Industrial Projects (Y/N)?	N	

Table 4: Detailed Peak Daily Criteria Pollutant Emissions Summary						
	VOC	CO	NOx	SO2	PM10	PM2.5
	lb/day					
<i>Month 1</i>						
Off-Road	1.27	6.88	17.12	0.01	0.62	0.57
Onsite On-Road	0.01	0.07	0.15	0.00	0.00	0.00
Offsite On-Road	0.03	0.48	0.65	0.00	0.01	0.01
Fugitive Dust	-	-	-	-	8.18	3.49
Total	1.30	7.44	17.92	0.01	8.82	4.07
<i>Month 2</i>						
Off-Road	3.96	21.69	53.73	0.04	1.95	1.79
Onsite On-Road	0.02	0.23	0.81	0.00	0.02	0.02
Offsite On-Road	0.23	1.82	8.45	0.00	0.18	0.17
Fugitive Dust	-	-	-	-	26.03	11.26
Total	4.22	23.74	62.99	0.04	28.18	13.23
<i>Month 3</i>						
Off-Road	6.65	36.53	90.24	0.07	3.27	3.01
Onsite On-Road	0.04	0.39	1.38	0.00	0.03	0.03
Offsite On-Road	0.46	3.47	16.64	0.00	0.36	0.33
Fugitive Dust	-	-	-	-	45.86	19.88
Total	7.15	40.39	108.26	0.07	49.52	23.25
<i>Month 4</i>						
Off-Road	10.67	60.67	140.66	0.12	5.17	4.78
Onsite On-Road	0.07	0.72	2.34	0.00	0.05	0.05
Offsite On-Road	0.56	5.95	18.78	0.00	0.40	0.37
Fugitive Dust	-	-	-	-	61.47	26.75
Total	11.31	67.35	161.78	0.12	67.10	31.95
<i>Month 5</i>						
Off-Road	9.93	57.91	128.63	0.12	4.79	4.45
Onsite On-Road	0.07	0.78	2.39	0.00	0.05	0.05
Offsite On-Road	0.49	5.82	15.84	0.00	0.34	0.31
Fugitive Dust	-	-	-	-	53.54	23.30
Total	10.49	64.51	146.85	0.12	58.72	28.10
<i>Month 6</i>						
Off-Road	6.90	40.79	79.00	0.11	3.00	2.85
Onsite On-Road	0.05	0.75	1.30	0.00	0.03	0.03
Offsite On-Road	0.28	5.75	6.21	0.00	0.13	0.12
Fugitive Dust	-	-	-	-	23.80	10.35
Total	7.22	47.29	86.51	0.11	26.95	13.36
<i>Month 7</i>						
Off-Road	6.98	38.50	84.03	0.10	3.08	2.91
Onsite On-Road	0.04	0.64	1.05	0.00	0.02	0.02
Offsite On-Road	0.21	4.71	4.56	0.00	0.10	0.09
Fugitive Dust	-	-	-	-	29.75	12.94
Total	7.23	43.85	89.64	0.10	32.95	15.96
<i>Month 8</i>						
Off-Road	4.29	24.15	49.19	0.07	1.89	1.79
Onsite On-Road	0.04	0.52	0.97	0.00	0.02	0.02
Offsite On-Road	0.19	3.95	4.42	0.00	0.09	0.09
Fugitive Dust	-	-	-	-	7.93	3.45
Total	4.51	28.62	54.57	0.07	9.94	5.35
<i>Month 9</i>						
Off-Road	2.86	15.19	32.63	0.05	1.17	1.12
Onsite On-Road	0.03	0.40	1.02	0.00	0.02	0.02
Offsite On-Road	0.13	2.78	2.90	0.00	0.06	0.06

Table 4: Detailed Peak Daily Criteria Pollutant Emissions Summary						
	VOC	CO	NOx	SO2	PM10	PM2.5
	lb/day					
Onsite On-Road	0.00	0.00	0.00	0.00	0.00	0.00
Offsite On-Road	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust	-	-	-	-	0.00	0.00
Striping	41.72	-	-	-	-	-
Total	41.72	0.00	0.00	0.00	0.00	0.00

Table 6: CO EMISSIONS SUMMARY

Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Emission Factor (lb/hr)	DAILY EMISSION SUMMARY - Offroad Equipment																																			
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
					hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day
Construction Equipment					TOTAL HOURS OF OPERATION PER DAY																																			
Air Compressor	P65WK	23.5	Diesel	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Backhoe	450E	124	Diesel	0.32	0.0	0.0	0.0	0.0	0.0	0.0	22.0	7.1	27.0	8.7	16.0	5.2	14.0	4.5	14.0	4.5	4.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Pump Rig	B50	130	Diesel	0.63	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6	5.0	3.2	13.0	8.2	4.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Crane	YB7722	130	Diesel	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Dozer	DP10T	580	Diesel	1.42	4.0	5.7	13.0	18.4	21.0	29.7	29.0	41.0	25.0	35.4	5.0	7.1	10.0	14.2	2.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Forklift	DP45K	124	Diesel	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	2.8	13.0	2.5	13.0	2.5	13.0	2.5	13.0	2.5	13.0	2.5	13.0	2.5	13.0	2.5	4.0	0.8	4.0	0.8	4.0	0.8	4.0	0.8	
Generator	XQ400	328	Diesel	0.56	0.0	0.0	0.0	0.0	0.0	0.0	7.0	3.9	7.0	3.9	17.0	9.5	17.0	9.5	14.0	7.9	12.0	6.7	12.0	6.7	12.0	6.7	12.0	6.7	18.0	10.1	18.0	10.1	16.0	9.0	12.0	6.7	0.0	0.0		
Loader	972H	287	Diesel	0.41	3.0	1.2	2.0	0.8	2.0	0.8	4.0	1.6	4.0	1.6	8.0	3.3	6.0	2.4	7.0	2.8	5.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Motor Grader	160M	213	Diesel	0.28	0.0	0.0	0.0	0.0	2.0	0.6	2.0	0.6	2.0	0.6	7.0	2.0	5.0	1.4	2.0	0.6	4.8	1.3	4.8	1.3	4.8	1.3	4.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Paving Machine	AP1055D	224	Diesel	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Roller	CB-534D	130	Diesel	0.32	0.0	0.0	0.0	0.0	1.5	0.5	2.5	0.8	2.5	0.8	5.5	1.8	1.5	0.5	0.0	0.0	0.0	2.4	0.8	2.4	0.8	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sheeps Foot	825G	315	Diesel	0.62	0.0	0.0	4.0	2.5	8.0	4.9	8.0	4.9	6.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
On-Site Motor Vehicles					DAILY EMISSIONS SUMMARY - ONSITE ONROAD VEHICLES																																			
On-Site Motor Vehicles	Category	Fuel	Emission Factor (lb/mile)	Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18		
				mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day			
				Dump Truck	MHDT-DSL	Diesel	0.0014	9	1.E-02	38	5.E-02	61	9.E-02	98	1.E-01	103	1.E-01	32	5.E-02	26	4.E-02	24	3.E-02	48	7.E-02	48	7.E-02	48	7.E-02	24	3.E-02	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0
Flatbed Truck	MHDT-DSL	Diesel	0.0014	0	0.E+00	0	0.E+00	0	0.E+00	24	3.E-02	24	3.E-02	26	4.E-02	18	3.E-02	16	2.E-02	10	1.E-02	10	1.E-02	10	1.E-02	4	6.E-03	28	4.E-02	19	3.E-02	4	6.E-03	4	6.E-03	0	0.E+00			
Oil/Lube Truck International	LHDT2-DSL	Diesel	0.0018	0	0.E+00	3	5.E-03	4	7.E-03	8	1.E-02	8	1.E-02	7	1.E-02	7	1.E-02	6	1.E-02	5	9.E-03	5	9.E-03	5	9.E-03	4	7.E-03	4	7.E-03	4	7.E-03	4	7.E-03	0	0.E+00	0	0.E+00			
Pickup Truck	LDT1-CAT	Gasoline	0.0063	4	3.E-02	11	7.E-02	15	9.E-02	23	1.E-01	30	2.E-01	31	2.E-01	29	2.E-01	20	1.E-01	15	9.E-02	15	9.E-02	15	9.E-02	15	9.E-02	15	9.E-02	15	9.E-02	5	3.E-02	5	3.E-02	0	0.E+00			
Water Truck	HHDT-DSL	Diesel	0.0014	1	1.E-03	14	2.E-02	28	4.E-02	28	4.E-02	26	4.E-02	22	3.E-02	20	3.E-02	20	3.E-02	6	8.E-03	6	8.E-03	6	8.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00			
Worker Vehicles	LDT1-CAT	Gasoline	0.0063	6	4.E-02	14	9.E-02	26	2.E-01	56	4.E-01	58	4.E-01	69	4.E-01	58	4.E-01	48	3.E-01	34	2.E-01	27	2.E-01	33	2.E-01	25	2.E-01	31	2.E-01	33	2.E-01	21	1.E-01	15	9.E-02	0	0.E+00			
Off-Site Motor Vehicles					DAILY EMISSIONS SUMMARY - OFFSITE ONROAD																																			
Off-Site Motor Vehicles	Category	Fuel	Emission Factor (lb/mile)	Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18		
				mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day			
				Dump Truck	MHDT-DSL	Diesel	0.0014	35	5.E-02	540	8.E-01	1080	2.E+00	1120	2.E+00	850	1.E+00	40	6.E-02	120	2.E-01	120	2.E-01	120	2.E-01	120	2.E-01	120	2.E-01	60	8.E-02	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0
Flatbed Truck	MHDT-DSL	Diesel	0.0014	0	0.E+00	0	0.E+00	0	0.E+00	36	5.E-02	56	8.E-02	122	2.E-01	82	1.E-01	116	2.E-01	40	6.E-02	80	1.E-01	40	6.E-02	60	8.E-02	60	8.E-02	13	2.E-02	0	0.E+00	0	0.E+00	0	0.E+00			
18 Wheel Low Boy	HHDT-DSL	Diesel	0.0014	4	6.E-03	6	8.E-03	4	6.E-03	10	1.E-02	8	1.E-02	8	1.E-02	6	8.E-03	12	2.E-02	4	6.E-03	0	0.E+00	2	3.E-03	2	3.E-03	0	0.E+00	4	6.E-03	0	0.E+00	0	0.E+00	0	0.E+00			
Fuel Truck	HHDT-DSL	Diesel	0.0014	2	3.E-03	12	2.E-02	15	2.E-02	38	5.E-02	36	5.E-02	32	5.E-02	30	4.E-02	25	4.E-02	14	2.E-02	14	2.E-02	24	3.E-02	12	2.E-02	10	1.E-02	20	3.E-02	0	0.E+00	0	0.E+00	0	0.E+00			
Red-Mix Truck	HHDT-DSL	Diesel	0.0014	0	0.E+00	0	0.E+00	0	0.E+00	24	3.E-02	81	1.E-01	181	3.E-01	40	6.E-02	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00			
Worker Vehicles	LDT1-CAT	Gasoline	0.0063	68	4.E-01	165	1.E+00	308	2.E+00	675	4.E+00	698	4.E+00	833	5.E+00	690	4.E+00	570	4.E+00	405	3.E+00	323	2.E+00	398	2.E+00	300	2.E+00	375	2.E+00	390	2.E+00	255	2.E+00	180	1.E+00	0	0.E+00			

Work Schedule
 Days/Week 5
 Week/Month 4
 Days/Month 20

453.6 g/lb

Table 9: PM10 EMISSIONS SUMMARY

Equipment/Vehicle Type		Model	Brake Horsepower (BHP)	Fuel Type	Emission Factor (lb/hr)	DAILY EMISSION SUMMARY - Offroad Equipment																																			
						Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
						hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day		
Construction Equipment						TOTAL HOURS OF OPERATION PER DAY																																			
Air Compressor	P65WK	23.5	Diesel	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Backhoe	450E	124	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Concrete Pump Rig	850	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	5.0	0.2	13.0	0.4	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Crane	YB7722	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Dazer	D10T	580	Diesel	0.13	4.0	0.5	13.0	1.7	21.0	2.8	29.0	3.9	25.0	3.3	5.0	0.7	10.0	1.3	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Excavator	DP45K	124	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Generator	XQ400	328	Diesel	0.04	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.3	7.0	0.3	17.0	0.7	17.0	0.7	14.0	0.5	12.0	0.5	12.0	0.5	12.0	0.5	12.0	0.5	18.0	0.7	16.0	0.7	12.0	0.5	0.0	0.0	0.0	0.0			
Loader	972H	287	Diesel	0.03	3.0	0.1	2.0	0.1	2.0	0.1	4.0	0.1	4.0	0.1	8.0	0.2	6.0	0.2	7.0	0.2	5.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Motor Grader	T60M	213	Diesel	0.03	0.0	0.0	0.0	0.0	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0	0.1	2.0		
Paving Machine	AP1055D	224	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Roller	CB-534D	130	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.5	0.0	2.5	0.0	5.5	0.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Sheeps Foot	825G	315	Diesel	0.04	0.0	0.0	4.0	0.2	8.0	0.3	8.0	0.3	6.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

On-Site Motor Vehicles		Category	Fuel	Emission Factor (lb/mile)	DAILY EMISSIONS SUMMARY - ONSITE ONROAD VEHICLES																																			
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
					m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day		
Dump Truck	MHDT-DSL	Diesel	0.0003	9	3.E-03	38	1.E-02	61	2.E-02	98	3.E-02	103	3.E-02	32	1.E-02	26	8.E-03	24	8.E-03	48	2.E-02	48	2.E-02	24	8.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Flatbed Truck	MHDT-DSL	Diesel	0.0003	0	0.E+00	0	0.E+00	0	0.E+00	24	8.E-03	24	8.E-03	26	8.E-03	18	6.E-03	16	5.E-03	10	3.E-03	10	3.E-03	4	1.E-03	28	9.E-03	28	9.E-03	19	6.E-03	4	1.E-03	4	1.E-03	4	1.E-03	0	0.E+00	
Oil/Lube Truck International	LHDY2-DSL	Diesel	0.0001	0	0.E+00	3	3.E-04	4	4.E-04	3	3.E-04	3	3.E-04	7	7.E-04	7	7.E-04	5	5.E-04	5	4.E-04	5	4.E-04	4	4.E-04	4	4.E-04	4	4.E-04	4	4.E-04	4	4.E-04	4	4.E-04	0	0.E+00	0	0.E+00	
Pickup Truck	LDT1-CAT	Gasoline	0.0000	4	4.E-05	11	1.E-04	15	1.E-04	23	2.E-04	30	3.E-04	31	3.E-04	29	3.E-04	20	2.E-04	15	1.E-04	15	1.E-04	15	1.E-04	15	1.E-04	15	1.E-04	15	1.E-04	15	1.E-04	5	5.E-05	5	5.E-05	0	0.E+00	
Water Truck	MHDT-DSL	Diesel	0.0003	1	3.E-04	14	5.E-03	28	9.E-03	28	9.E-03	26	8.E-03	22	7.E-03	20	6.E-03	20	6.E-03	6	2.E-03	6	2.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Worker Vehicles	LDT1-CAT	Gasoline	0.0000	6	5.E-05	14	1.E-04	26	2.E-04	56	5.E-04	58	6.E-04	69	7.E-04	58	6.E-04	48	5.E-04	34	3.E-04	27	3.E-04	33	3.E-04	25	2.E-04	31	3.E-04	33	3.E-04	21	2.E-04	15	1.E-04	0	0.E+00	0	0.E+00	

Off-Site Motor Vehicles		Category	Fuel	Emission Factor (lb/mile)	DAILY EMISSIONS SUMMARY - OFFSITE ONROAD																																			
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
					m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day		
Dump Truck	MHDT-DSL	Diesel	0.0003	35	1.E-02	540	2.E-01	1080	3.E-01	1120	4.E-01	850	3.E-01	40	1.E-02	120	4.E-02	120	4.E-02	120	4.E-02	120	4.E-02	60	2.E-02	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Flatbed Truck	MHDT-DSL	Diesel	0.0003	0	0.E+00	0	0.E+00	0	0.E+00	36	1.E-02	56	2.E-02	122	4.E-02	82	3.E-02	115	4.E-02	40	1.E-02	60	2.E-02	60	2.E-02	40	1.E-02	40	1.E-02	13	4.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
18 Wheel Low Boy	MHDT-DSL	Diesel	0.0003	4	1.E-03	6	2.E-03	4	1.E-03	10	3.E-03	8	3.E-03	8	3.E-03	6	2.E-03	12	4.E-03	4	1.E-03	0	0.E+00	2	6.E-04	2	6.E-04	0	0.E+00	4	1.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Fuel Truck	MHDT-DSL	Diesel	0.0003	2	6.E-04	12	4.E-03	15	5.E-03	38	1.E-02	32	1.E-02	32	1.E-02	30	1.E-02	25	8.E-03	14	5.E-03	14	5.E-03	24	8.E-03	12	4.E-03	10	3.E-03	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Res-Mix Truck	MHDT-DSL	Diesel	0.0003	0	0.E+00	0	0.E+00	0	0.E+00	24	8.E-03	81	3.E-02	181	6.E-02	40	1.E-02	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	0	0.E+00	
Worker Vehicles	LDT1-CAT	Gasoline	0.0000	68	7.E-04	165	2.E-03	308	3.E-03	675	7.E-03	688	7.E-03	833	8.E-03	690	7.E-03	570	6.E-03	405	4.E-03	323	3.E-03	398	4.E-03	300	3.E-03	375	4.E-03	390	4.E-03	255	2.E-03	190	2.E-03	0	0.E+00	0	0.E+00	

Work Schedule
 Days/Week 5
 Week/Month 4
 Days/Month 20
 453.6 g/b

Earthwork Fugitive Particulate Matter Emissions

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) ¹	PM2.5 Emission Factor (lb/activity) ¹	PM10 (lb/day) ²	PM2.5 (lb/day) ²
Soil Handling ³	CY	602	36,122	4.18E-04	6.33E-05	0.25	0.04
Bulldozing, Scraping and Grading	hr	31.0	0	1.983	0.863	61.47	26.75
Total						61.73	26.79

¹ Emissions (lb/day) = Emission factor (lb/activity unit) x Daily Activity level (units/day)
² Emissions (lb/day) = Emission factor (lb/activity unit) x Daily Activity level (units/day)
³ Soil handling during grading/excavation activities is assumed to occur over the first 3 of 18 months of the Proposed Project, or for a duration of 60 days.

Material Handling Summary	
Trails/Trail Amenities	
Grading/Excavation/Fill	6,150 CY
Staging Area Fill	21,667 CY
Bridge #1	
Grading/Excavation	1,430 CY
Bridge #2	
Grading/Excavation	1,175 CY
Fill	5,700 CY
Bridge #3	
Grading/Excavation	0 CY
Summary =	36,122 CY

Peak Daily PM10 Emissions Summary																		
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
Offroad and Onroad Equipment																		
Offroad	0.62	1.95	3.27	5.17	4.79	3.00	3.08	1.89	1.17	0.95	1.21	0.84	1.05	1.24	0.79	0.59	0.00	0.00
Onsite Onroad	0.00	0.02	0.03	0.05	0.05	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Offsite Onroad	0.01	0.18	0.36	0.40	0.34	0.13	0.10	0.09	0.06	0.07	0.06	0.05	0.03	0.02	0.01	0.00	0.00	0.00
Earthwork/Fugitive Dust																		
Soil Handling	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	7.93	25.78	45.61	61.47	53.54	23.80	29.75	7.93	9.52	9.52	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fugitive Dust Emissions =	8.18	26.03	45.86	61.47	53.54	23.80	29.75	7.93	9.52	9.52	9.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Daily Emissions =	8.82	28.18	49.52	67.10	58.72	26.95	32.95	9.94	10.77	10.56	10.82	0.90	1.09	1.27	0.80	0.59	0.00	0.00

MAX
67.10

Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Emission Factor (lb/hr)	Daily Onsite Offroad Emissions - Trails/Traffic Amenities																																			
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
					hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day		
Construction Equipment					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Air Compressor	PE50K	23.5	Diesel	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Backhoe	450E	124	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.3	19.0	0.4	16.0	0.3	6.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Concrete Pump Rig	B50	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.0	0.1	3.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Crane	YB772	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Digger	D10T	560	Diesel	0.13	4.0	0.5	13.0	1.7	21.0	2.5	21.0	2.5	17.0	2.3	5.0	0.7	2.0	0.3	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Forklift	DP45K	124	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Generator	XG400	329	Diesel	0.04	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.1	2.0	0.1	5.0	0.2	5.0	0.2	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Loader	972H	297	Diesel	0.03	3.0	0.1	2.0	0.1	2.0	0.1	4.0	0.1	4.0	0.1	9.0	0.2	6.0	0.2	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Motor Grader	160M	213	Diesel	0.03	0.0	0.0	0.0	0.0	2.0	0.1	2.0	0.1	2.0	0.1	7.0	0.2	5.0	0.2	2.0	0.1	4.8	0.2	4.8	0.2	4.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Paving Machine	AP105D	224	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Roller	CS-54D	130	Diesel	0.02	0.0	0.0	0.0	1.5	0.0	2.5	0.0	2.5	0.0	5.5	0.1	1.5	0.0	0.0	0.0	2.4	0.0	2.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sheeps Foot	825G	315	Diesel	0.04	0.0	0.0	4.0	0.2	8.0	0.3	8.0	0.3	6.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

On-Site Motor Vehicles	Category	Fuel	Emission Factor (lb/mile)	Daily Onsite Onroad Emissions - Trails/Traffic Amenities																																			
				Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
				m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day		
Dump Truck	MHDT-DSL	Diesel	0.0003	9	0.00	36	0.01	61	0.02	99	0.03	32	0.01	16	0.01	15	0.01	48	0.02	48	0.02	6	0.00	24	0.01	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Flatbed Truck	MHDT-DSL	Diesel	0.0003	0	0.00	0	0.00	0	0.00	20	0.01	22	0.01	14	0.00	12	0.00	6	0.00	6	0.00	0	0.00	24	0.01	24	0.01	15	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Oil/Lube Truck International	LHDT2-DSL	Diesel	0.0001	0	0.00	3	0.00	4	0.00	4	0.00	3	0.00	3	0.00	2	0.00	1	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Pickup Truck	LDT1-CAT	Gasoline	0.0000	4	0.00	11	0.00	15	0.00	18	0.00	25	0.00	26	0.00	24	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00
Water Truck	HHDT-DSL	Diesel	0.0003	1	0.00	14	0.00	28	0.01	28	0.01	22	0.01	20	0.01	20	0.01	6	0.00	6	0.00	6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Worker Vehicles	LDT1-CAT	Gasoline	0.0000	6	0.00	14	0.00	26	0.00	56	0.00	58	0.00	69	0.00	58	0.00	34	0.00	27	0.00	33	0.00	25	0.00	31	0.00	33	0.00	15	0.00	15	0.00	0	0.00	0	0.00	0	0.00

Source	Units	Earthwork Particulate Matter Emissions - Trails/Traffic Amenities																																					
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18			
		CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day				
Soil Handling	CY	464	0.19	464	0.19	464	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bulldozing, Scraping and Grading	Hr/day	4.0	7.93	13.0	25.78	23.0	45.61	23.0	45.61	19.0	37.68	12.0	23.80	7.0	13.88	4.0	7.93	4.8	9.52	4.8	9.52	4.8	9.52	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
Fugitive Dust Emissions Summary, lb/day =		8.13		25.97		45.80		45.61		37.68		23.80		13.88		7.93		4.8		4.8		4.8		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
Total Daily Onsite Emissions	8.80	28.00	49.16	66.63	58.38	26.82	32.85	9.85	10.71	10.49	10.75	0.85	1.06	1.25	0.80	0.59	0.00	0.00
Total Onsite - Trails and Trail Amenities	8.75	27.94	49.10	66.40	58.12	26.75	32.78	9.75	10.65	10.43	10.70	0.84	1.05	1.24	0.79	0.59	0.00	0.00
Total Onsite - Bridges	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Bridge #1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Bridge #2	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Bridge #3	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

MAX
49.40

Earthwork Fugitive Particulate Matter Emissions

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM2.5 Emission Factor (lb/activity) ¹	PM2.5 (lb/day) ²
Soil Handling ³	CY	602	36,122	6.33E-05	0.04
Bulldozing, Scraping and Grading	hr	31.0	0	0.863	26.75
Total					26.79

¹ Emissions (lb/day) = Emission factor (lb/activity unit) x Daily Activity level (units/day)
² Emissions (lb/day) = Emission factor (lb/activity unit) x Daily Activity level (units/day)
³ Soil handling during grading/excavation activities is assumed to occur over the first 3 of 18 months of the Proposed Project, or for a duration of 60 days.

Material Handling Summary	
<i>Trails/Trail Amenities</i>	
Grading/Excavation/Fill	6,150 CY
Staging Area Fill	21,667 CY
<i>Bridge #1</i>	
Grading/Excavation	1,430 CY
<i>Bridge #2</i>	
Grading/Excavation	1,175 CY
Fill	5,700 CY
<i>Bridge #3</i>	
Grading/Excavation	0 CY
Summary =	36,122 CY

Peak Daily PM2.5 Emissions Summary																		
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
Offroad and Onroad Equipment																		
Offroad	0.57	1.79	3.01	4.78	4.45	2.85	2.91	1.79	1.12	0.91	1.16	0.82	1.03	1.21	0.78	0.58	0.00	0.00
Onsite Onroad	0.00	0.02	0.03	0.05	0.05	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Offsite Onroad	0.01	0.17	0.33	0.37	0.31	0.12	0.09	0.09	0.06	0.07	0.06	0.04	0.02	0.02	0.01	0.00	0.00	0.00
Earthwork/Fugitive Dust																		
Soil Handling	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	3.45	11.22	19.85	26.75	23.30	10.35	12.94	3.45	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fugitive Dust Emissions =	3.49	11.26	19.88	26.75	23.30	10.35	12.94	3.45	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Daily Emissions =	4.07	13.23	23.25	31.95	28.10	13.36	15.96	5.35	5.34	5.14	5.38	0.87	1.07	1.24	0.80	0.59	0.00	0.00

Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Emission Factor (lb/hr)	Daily Onsite Offroad Emissions - Trails/Trail Amenities																																			
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
					hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day		
Air Compressor	P65WK	23.5	Diesel	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Backhoe	450E	124	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	14.0	0.3	19.0	0.3	16.0	0.3	6.0	0.1	6.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Concrete Pump Rig	B50	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.0	0.1	3.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Crane	YB722	130	Diesel	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Dozer	D10T	580	Diesel	0.12	4.0	0.5	13.0	1.6	21.0	2.6	21.0	2.6	17.0	2.1	5.0	0.6	2.0	0.2	2.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Forklift	DP45K	124	Diesel	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Generator	XO400	328	Diesel	0.04	0.0	0.0	0.0	0.0	0.0	2.0	0.1	2.0	0.1	5.0	0.2	5.0	0.2	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.2	6.0	0.2	4.0	0.2	0.0	0.0	0.0	0.0		
Loader	972H	287	Diesel	0.03	3.0	0.1	2.0	0.1	2.0	0.1	4.0	0.1	4.0	0.1	8.0	0.2	6.0	0.2	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Motor Grader	160M	213	Diesel	0.03	0.0	0.0	0.0	0.0	2.0	0.1	2.0	0.1	2.0	0.1	7.0	0.2	5.0	0.2	2.0	0.1	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	0.2	4.8	
Paving Machine	AP1055D	224	Diesel	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Roller	CB-534D	130	Diesel	0.02	0.0	0.0	0.0	0.0	1.5	0.0	2.5	0.0	2.5	0.0	5.5	0.1	1.5	0.0	0.0	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0	2.4	0.0		
Sheeps Foot	825G	315	Diesel	0.04	0.0	0.0	4.0	0.1	8.0	0.3	8.0	0.3	6.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

On-Site Motor Vehicles	Category	Fuel	Emission Factor (lb/mile)	Daily Onsite Onroad Emissions - Trails/Trail Amenities																																							
				Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18					
				mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day	mi/day	lb/day						
Dump Truck	MHDT-DSL	Diesel	0.0003	9	0.00	38	0.01	61	0.02	90	0.03	93	0.03	32	0.01	16	0.00	16	0.00	48	0.01	48	0.01	48	0.01	24	0.01	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00		
Flatbed Truck	MHDT-DSL	Diesel	0.0003	0	0.00	0	0.00	0	0.00	20	0.01	20	0.01	22	0.01	14	0.00	12	0.00	6	0.00	6	0.00	6	0.00	0	0.00	24	0.01	15	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Oil/Lube Truck International	LHDT2-DSL	Diesel	0.0001	0	0.00	3	0.00	4	0.00	4	0.00	3.5	0.00	3	0.00	3	0.00	2	0.00	1	0.00	1	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Pickup Truck	LDT1-CAT	Gasoline	0.0000	4	0.00	11	0.00	15	0.00	18	0.00	25	0.00	26	0.00	24	0.00	15	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00	10	0.00
Water Truck	HHDT-DSL	Diesel	0.0003	1	0.00	14	0.00	28	0.01	28	0.01	26	0.01	22	0.01	20	0.01	20	0.01	6	0.00	6	0.00	6	0.00	6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Worker Vehicles	LDT1-CAT	Gasoline	0.0000	6	0.00	14	0.00	26	0.00	56	0.00	58	0.00	69	0.00	58	0.00	48	0.00	34	0.00	27	0.00	33	0.00	25	0.00	31	0.00	33	0.00	21	0.00	15	0.00	0	0.00	0	0.00	0	0.00		

		Earthwork Particulate Matter Emissions - Trails/Trail Amenities																																			
Source	Units	Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18	
		CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day	CY or Hr/Day	lb/day		
		Soil Handling	CY	464	0.03	464	0.03	464	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Bulldozing, Scraping and Grading	Hr/day	4.0	3.45	13.0	11.22	23.0	19.85	23.0	19.85	19.0	16.40	12.0	10.35	7.0	6.04	4.0	3.45	4.8	4.14	4.8	4.14	4.8	4.14	4.8	4.14	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
Fugitive Dust Emissions Summary, lb/day =		3.48		11.25		19.88		19.85		16.40		10.35		6.04		3.45		4.14		4.8		4.14		4.8		4.14		0.00		0.00		0.00		0.00		0.00	

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
Total Daily Onsite Emissions	4.06	13.06	22.92	31.58	27.79	13.23	15.87	5.26	5.28	5.08	5.32	0.82	1.04	1.21	0.79	0.59	0.00	0.00
Total Onsite - Trails and Trail Amenities	4.05	13.06	22.91	23.34	19.49	12.18	6.99	4.02	4.36	4.36	0.11	0.33	0.33	0.20	0.00	0.00	0.00	0.00
Total Onsite - Bridges	0.01	0.01	0.01	8.24	8.30	1.06	8.89	1.24	0.82	0.72	0.96	0.72	0.89	0.59	0.59	0.00	0.00	0.00
Bridge #1	0.00	0.00	0.00	2.75	2.77	0.35	2.96	0.41	0.31	0.24	0.32	0.24	0.24	0.30	0.20	0.20	0.00	0.00
Bridge #2	0.00	0.00	0.00	2.75	2.77	0.35	2.96	0.41	0.31	0.24	0.32	0.24	0.24	0.30	0.20	0.20	0.00	0.00
Bridge #3	0.00	0.00	0.00	2.75	2.77	0.35	2.96	0.41	0.31	0.24	0.32	0.24	0.24	0.				

Table 13a: Offroad Emission Factors

Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Load Factor
Construction Equipment				
Air Compressor Ingersol Rand	P65WK	23.5	Diesel	0.48
Backhoe	450E	124	Diesel	0.37
Concrete Pump Rig	B50	130	Diesel	0.74
Crane 20 Tn Grove	YB7722	130	Diesel	0.29
Dozer,Cat	D10T	580	Diesel	0.40
Forklift	DP45K	124	Diesel	0.20
Generator	XQ400	328	Diesel	0.74
Loader	972H	287	Diesel	0.37
Motor Grader	160M	213	Diesel	0.41
Paving Machine	AP1055D	224	Diesel	0.36
Roller	CB-534D	130	Diesel	0.38
Sheeps Foot	825G	315	Diesel	0.42

Offroad Emission Factors (g/bhp-hr) ¹							
ROG/VOC	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
g/bhp-hr							
1.481	5.604	4.871	0.007	0.371	0.371	568.299	0.133
0.354	3.200	3.879	0.005	0.197	0.182	493.912	0.151
0.376	2.975	3.400	0.006	0.159	0.159	568.299	0.033
0.696	3.787	7.360	0.005	0.397	0.366	501.093	0.154
0.526	2.767	7.172	0.005	0.260	0.239	499.367	0.153
0.508	3.452	5.362	0.005	0.294	0.270	498.334	0.153
0.224	1.048	2.579	0.005	0.076	0.076	568.299	0.020
0.272	1.739	3.490	0.005	0.122	0.112	497.113	0.152
0.396	1.449	5.525	0.005	0.180	0.166	503.802	0.154
0.288	1.333	4.121	0.005	0.142	0.130	498.732	0.153
0.314	2.981	3.874	0.005	0.180	0.166	497.909	0.153
0.290	2.121	3.777	0.005	0.138	0.127	501.130	0.154

Offroad Emission Factors (lb/hr) ²							
ROG/VOC	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
lb/hr							
0.04	0.14	0.12	0.00	0.01	0.01	14.13	0.00
0.04	0.32	0.39	0.00	0.02	0.02	49.96	0.02
0.08	0.63	0.72	0.00	0.03	0.03	120.53	0.01
0.06	0.31	0.61	0.00	0.03	0.03	41.65	0.01
0.27	1.42	3.67	0.00	0.13	0.12	255.41	0.08
0.03	0.19	0.29	0.00	0.02	0.01	27.25	0.01
0.12	0.56	1.38	0.00	0.04	0.04	304.10	0.01
0.06	0.41	0.82	0.00	0.03	0.03	116.38	0.04
0.08	0.28	1.06	0.00	0.03	0.03	97.00	0.03
0.05	0.24	0.73	0.00	0.03	0.02	88.66	0.03
0.03	0.32	0.42	0.00	0.02	0.02	54.23	0.02
0.08	0.62	1.10	0.00	0.04	0.04	146.16	0.04

Source:

1. CalEEMod User's Guide, Appendix D Default Data Tables. September 2013 (Table 3.4 OFFROAD Equipment Emission Factors (g/bhp-hr).

2. Emission factors converted from gr/bhp-hr to lb/hr by multiplying values in Table 1a by equipment specific horsepower. The sum was then converted to pounds based on 453.6 grams per pound.

Conversions

Value Units
453.6 g/lb

Table 13b: Onroad Emission Factors

EMFAC2011 Emission Rates

Region Type: Air Basin

Region: South Coast

Calendar Year: 2017

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNI (gms/mile)	TOG_RUNI (gms/mile)	CO_RUNE (gms/mile)	NOX_RUNI (gms/mile)	CO2_RUNE (gms/mile)	CO2_RUNE (gms/mile)	PM10_RUN (gms/mile)	PM2_5_RL (gms/mile)	SO2 (gms/mile)
South Coast	2017	Annual	LDA	GAS	Aggregate	30	37364810	0.0	0.0	1.1	0.1	359.5	283.5	0.0	0.0	0.003
South Coast	2017	Annual	LDA	DSL	Aggregate	30	123440.9	0.0	0.0	0.2	0.4	295.0	231.2	0.0	0.0	0.003
South Coast	2017	Annual	LDT1	GAS	Aggregate	30	4311993	0.1	0.1	2.8	0.3	414.8	341.2	0.0	0.0	0.000
South Coast	2017	Annual	LDT1	DSL	Aggregate	30	6197.638	0.1	0.1	0.3	0.5	308.4	243.9	0.1	0.1	0.000
South Coast	2017	Annual	LDT2	GAS	Aggregate	30	13082342	0.0	0.1	1.5	0.2	489.8	412.0	0.0	0.0	0.000
South Coast	2017	Annual	LDT2	DSL	Aggregate	30	6369.446	0.0	0.0	0.2	0.4	299.0	244.0	0.0	0.0	0.000
South Coast	2017	Annual	LHD1	GAS	Aggregate	30	1542844	0.1	0.1	1.6	0.4	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	LHD1	DSL	Aggregate	30	334463.7	0.2	0.2	0.9	2.8	521.9	495.8	0.0	0.0	0.000
South Coast	2017	Annual	LHD2	GAS	Aggregate	30	164519.2	0.1	0.1	1.2	0.4	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	LHD2	DSL	Aggregate	30	112434.2	0.2	0.2	0.8	2.7	523.1	496.9	0.0	0.0	0.000
South Coast	2017	Annual	MCY	GAS	Aggregate	30	305995.9	2.1	2.3	16.2	1.1	145.3	138.0	0.0	0.0	0.000
South Coast	2017	Annual	MDV	GAS	Aggregate	30	9928681	0.1	0.1	2.4	0.3	623.9	543.5	0.0	0.0	0.000
South Coast	2017	Annual	MDV	DSL	Aggregate	30	10544.91	0.0	0.0	0.2	0.3	294.1	251.3	0.0	0.0	0.000
South Coast	2017	Annual	MH	GAS	Aggregate	30	82374.13	0.1	0.2	3.9	0.6	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	MH	DSL	Aggregate	30	11788.29	0.2	0.2	0.6	6.8	1227.7	1166.3	0.1	0.1	0.000

Table 13c

**Fugitive Dust Emission Factors - Controlled
Soil Dropping During Excavation**

Emission Factor [lb/cu. yd] = 0.0032 x (mean wind speed [mi/hr] / 5)^{1.3} / (moisture [%] / 2)^{1.4} x (number drops per ton) x (density [ton/cu. yd]) x k
Reference: AP-42, Equation (1), Section 13.2.4, November 2006

Parameter	Value	Basis
Mean Wind Speed	6.7	Conservative upper range obtained from AP-42 (Ranges of Source Conditions for Equation 1)
Moisture	10	Assumed moisture level achieved by watering
Number Drops	2	Assumption
Soil Density	1.215	Table 2.46, Handbook of Solid Waste Management

PM10 Emission Factor 4.18E-04 lb/cu. yd (k = 0.35)
PM2.5 Emission Factor 6.33E-05 lb/cu. yd (k = 0.053)

Emissions [pounds per day] = Controlled emission factor [pounds per cubic yard] x Volume soil handled [cubic yards per day]

Bulldozing, Scraping and Grading

PM10 Emission Factor [lb/hr] = 0.75 x (silt content [%])^{1.5} / (moisture)^{1.4}
PM2.5 Emission Factor [lb/hr] = 0.60 x (silt content [%])^{1.2} / (moisture)^{1.3}
Reference: AP-42, Table 11.9-1, July 1998

Parameter	Value	Basis
Silt Content	16.4	Geometric Mean, AP-42 Table 11.9-3 (scraper)
Moisture	10	Assumed moisture level achieved by watering

PM10 Emission Factor 1.98 lb/hr
PM2.5 Emission Factor 0.86 lb/hr

Emissions [pounds per day] = Controlled emission factor [pounds per hour] x Bulldozing, scraping or grading time [hours/day]

Santa Ana River Parkway Extension Project

Mitigated Air Quality Emission Calculations

Regional Impact Summary - Mitigated Daily Criteria Pollutant Emissions (Construction)

	NOx
Peak Day	lb/day
Month 1	7.95
Month 2	30.83
Month 3	54.70
Month 4	86.05
Month 5	79.84
Month 6	61.77
Month 7	57.39
Month 8	40.35
Month 9	29.93
Month 10	26.32
Month 11	27.67
Month 12	23.26
Month 13	29.44
Month 14	30.24
Month 15	24.05
Month 16	17.74
Month 17	0.06
Month 18	0.00
Peak Daily Emissions ¹ =	86.05
SCAQMD Mass Daily Regional Thresholds (Construction)	100
Would the Proposed Project Exceed SCAQMD Mass Daily Regional Thresholds (Construction) (Y/N) ² ?	N

Notes:

1. Values presented in "bold" represent emissions in excess of the SCAQMD's mass daily regional thresholds
2. Thresholds obtained from SCAQMD's website for CEQA significance thresholds and analysis (SCAQMD Air Quality Significance Thresholds, March 2011. Available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>)

Mitigated Daily Criteria Pollutant Emissions Summary						
	VOC	CO	NOx	SO2	PM10	PM2.5
lb/day						
<i>Month 1</i>						
Off-Road	1.27	6.88	7.15	0.01	0.62	0.57
Onsite On-Road	0.01	0.07	0.15	0.00	0.00	0.00
Offsite On-Road	0.03	0.48	0.65	0.00	0.01	0.01
Fugitive Dust	-	-	-	-	8.18	3.49
Total	1.30	7.44	7.95	0.01	8.82	4.07
<i>Month 2</i>						
Off-Road	3.96	21.69	21.57	0.04	1.95	1.79
Onsite On-Road	0.02	0.23	0.81	0.00	0.02	0.02
Offsite On-Road	0.23	1.82	8.45	0.00	0.18	0.17
Fugitive Dust	-	-	-	-	26.03	11.26
Total	4.22	23.74	30.83	0.04	28.18	13.23
<i>Month 3</i>						
Off-Road	6.65	36.53	36.68	0.07	3.27	3.01
Onsite On-Road	0.04	0.39	1.38	0.00	0.03	0.03
Offsite On-Road	0.46	3.47	16.64	0.00	0.36	0.33
Fugitive Dust	-	-	-	-	45.86	19.88
Total	7.15	40.39	54.70	0.07	49.52	23.25
<i>Month 4</i>						
Off-Road	10.67	60.67	64.94	0.12	5.17	4.78
Onsite On-Road	0.07	0.72	2.34	0.00	0.05	0.05
Offsite On-Road	0.56	5.95	18.78	0.00	0.40	0.37
Fugitive Dust	-	-	-	-	61.47	26.75
Total	11.31	67.35	86.05	0.12	67.10	31.95
<i>Month 5</i>						
Off-Road	9.93	57.91	61.62	0.12	4.79	4.45
Onsite On-Road	0.07	0.78	2.39	0.00	0.05	0.05
Offsite On-Road	0.49	5.82	15.84	0.00	0.34	0.31
Fugitive Dust	-	-	-	-	53.54	23.30
Total	10.49	64.51	79.84	0.12	58.72	28.10
<i>Month 6</i>						
Off-Road	6.90	40.79	54.26	0.11	3.00	2.85
Onsite On-Road	0.05	0.75	1.30	0.00	0.03	0.03
Offsite On-Road	0.28	5.75	6.21	0.00	0.13	0.12
Fugitive Dust	-	-	-	-	23.80	10.35
Total	7.22	47.29	61.77	0.11	26.95	13.36
<i>Month 7</i>						
Off-Road	6.98	38.50	51.79	0.10	3.08	2.91
Onsite On-Road	0.04	0.64	1.05	0.00	0.02	0.02
Offsite On-Road	0.21	4.71	4.56	0.00	0.10	0.09
Fugitive Dust	-	-	-	-	29.75	12.94
Total	7.23	43.85	57.39	0.10	32.95	15.96
<i>Month 8</i>						
Off-Road	4.29	24.15	34.96	0.07	1.89	1.79
Onsite On-Road	0.04	0.52	0.97	0.00	0.02	0.02
Offsite On-Road	0.19	3.95	4.42	0.00	0.09	0.09
Fugitive Dust	-	-	-	-	7.93	3.45
Total	4.51	28.62	40.35	0.07	9.94	5.35
<i>Month 9</i>						
Off-Road	2.86	15.19	26.01	0.05	1.17	1.12
Onsite On-Road	0.03	0.40	1.02	0.00	0.02	0.02
Offsite On-Road	0.13	2.78	2.90	0.00	0.06	0.06
Fugitive Dust	-	-	-	-	9.52	4.14
Total	3.02	18.38	29.93	0.05	10.77	5.34
<i>Month 10</i>						
Off-Road	2.39	11.86	21.91	0.04	0.95	0.91
Onsite On-Road	0.03	0.36	1.01	0.00	0.02	0.02
Offsite On-Road	0.13	2.32	3.39	0.00	0.07	0.07
Fugitive Dust	-	-	-	-	9.52	4.14
Total	2.56	14.54	26.32	0.04	10.56	5.14

Mitigated Daily Criteria Pollutant Emissions Summary						
	VOC	CO	NOx	SO2	PM10	PM2.5
lb/day						
<i>Month 11</i>						
Off-Road	2.86	14.38	23.64	0.05	1.21	1.16
Onsite On-Road	0.03	0.40	1.02	0.00	0.02	0.02
Offsite On-Road	0.13	2.75	3.01	0.00	0.06	0.06
Fugitive Dust	-	-	-	-	9.52	4.14
Total	3.02	17.53	27.67	0.05	10.82	5.38
<i>Month 12</i>						
Off-Road	2.15	11.09	20.62	0.04	0.84	0.82
Onsite On-Road	0.02	0.30	0.47	0.00	0.01	0.01
Offsite On-Road	0.10	2.07	2.18	0.00	0.05	0.04
Fugitive Dust	-	-	-	-	0.00	0.00
Total	2.27	13.45	23.26	0.04	0.90	0.87
<i>Month 13</i>						
Off-Road	2.96	14.22	27.70	0.05	1.05	1.03
Onsite On-Road	0.02	0.34	0.47	0.00	0.01	0.01
Offsite On-Road	0.09	2.44	1.26	0.00	0.03	0.02
Fugitive Dust	-	-	-	-	0.00	0.00
Total	3.07	17.00	29.44	0.05	1.09	1.07
<i>Month 14</i>						
Off-Road	3.29	15.67	28.59	0.06	1.24	1.21
Onsite On-Road	0.02	0.34	0.47	0.00	0.01	0.01
Offsite On-Road	0.09	2.53	1.18	0.00	0.02	0.02
Fugitive Dust	-	-	-	-	0.00	0.00
Total	3.40	18.54	30.24	0.06	1.27	1.24
<i>Month 15</i>						
Off-Road	2.32	10.84	23.38	0.05	0.79	0.78
Onsite On-Road	0.01	0.26	0.33	0.00	0.01	0.01
Offsite On-Road	0.05	1.61	0.34	0.00	0.01	0.01
Fugitive Dust	-	-	-	-	0.00	0.00
Total	2.38	12.72	24.05	0.05	0.80	0.80
<i>Month 16</i>						
Off-Road	1.70	8.04	17.55	0.03	0.59	0.58
Onsite On-Road	0.006	0.14	0.095	0.000	0.00	0.00
Offsite On-Road	0.03	1.13	0.10	0.00	0.00	0.00
Fugitive Dust	-	-	-	-	0.00	0.00
Total	1.73	9.31	17.74	0.03	0.59	0.59
<i>Month 17</i>						
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
Onsite On-Road	0.002	0.04	0.063	0.000	0.00	0.00
Offsite On-Road	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust	-	-	-	-	0.00	0.00
Total	0.00	0.04	0.06	0.00	0.00	0.00
<i>Month 18</i>						
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
Onsite On-Road	0.00	0.00	0.00	0.00	0.00	0.00
Offsite On-Road	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust	-	-	-	-	0.00	0.00
Striping	41.72	-	-	-	-	-
Total	41.72	0.00	0.00	0.00	0.00	0.00

NOx EMISSIONS SUMMARY																																																												
Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Emission Factor (lb/hr)	DAILY EMISSION SUMMARY - Offroad Equipment																																																							
					Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18																					
					hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day	hr/day	lb/day																				
TOTAL HOURS OF OPERATION PER DAY																							4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3	4.0	0.3
Construction Equipment	P65WK	23.5	Diesel	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																				
	450E	124	Diesel	0.26	0.0	0.0	0.0	0.0	0.0	0.0	22.0	5.8	27.0	7.1	16.0	4.2	14.0	3.7	14.0	3.7	4.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																			
	B50	130	Diesel	0.55	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6	5.0	2.8	13.0	7.2	4.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																			
	YB7722	130	Diesel	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																			
	D101	580	Diesel	1.33	4.0	5.3	13.0	17.3	21.0	28.0	29.0	38.6	25.0	33.3	5.0	6.7	10.0	13.3	2.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																			
	DP45K	124	Diesel	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	2.1	13.0	1.9	13.0	1.9	13.0	1.9	13.0	1.9	13.0	1.9	13.0	1.9	13.0	1.9	4.0	0.6	4.0	0.6	4.0	0.6	4.0	0.6	4.0	0.6	4.0	0.6																		
	XQ400	328	Diesel	1.39	0.0	0.0	0.0	0.0	0.0	0.0	7.0	9.8	7.0	9.8	17.0	23.7	17.0	23.7	14.0	19.5	12.0	16.7	12.0	16.7	12.0	16.7	12.0	16.7	12.0	16.7	18.0	25.1	16.0	22.3	12.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0																		
	972H	287	Diesel	0.61	3.0	1.8	2.0	1.2	2.0	1.2	4.0	2.4	4.0	2.4	8.0	4.9	6.0	3.7	7.0	4.3	5.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																	
	160M	213	Diesel	0.50	0.0	0.0	0.0	0.0	2.0	1.0	2.0	1.0	2.0	1.0	7.0	3.5	5.0	2.5	2.0	1.0	4.8	2.4	4.8	2.4	4.8	2.4	4.8	2.4	4.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																	
	API055D	224	Diesel	0.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
	CB-534D	130	Diesel	0.28	0.0	0.0	0.0	0.0	1.5	0.4	2.5	0.7	2.5	0.7	5.5	1.6	1.5	0.4	0.0	0.0	2.4	0.7	2.4	0.7	2.4	0.7	2.4	0.7	2.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
	825G	315	Diesel	0.76	0.0	0.0	0.0	4.0	3.0	8.0	6.1	8.0	6.1	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															

DAILY EMISSIONS SUMMARY - ON-SITE ONROAD VEHICLES																																													
Equipment/Vehicle Type	Category	Fuel	Emission Factor (lb/mile)	DAILY EMISSIONS SUMMARY - ON-SITE ONROAD VEHICLES																																									
				Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18							
				m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day				
Dump Truck	MHD0-DSL	Diesel	0.0150	0	1.0E-01	38	6.0E-01	61	9.0E-01	98	1.5E+00	103	2.0E+00	32	5.0E-01	26	4.0E-01	24	4.0E-01	48	7.0E-01	48	7.0E-01	24	4.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00		
Flatbed Truck	MHD0-DSL	Diesel	0.0150	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	14	4.0E-01	24	4.0E-01	18	3.0E-01	16	2.0E-01	40	1.0E-01	10	1.0E-01	10	1.0E-01	4	6.0E-02	28	4.0E-01	28	4.0E-01	19	3.0E-01	4	6.0E-02	4	6.0E-02	4	6.0E-02	0	0.0E+00	0	0.0E+00		
Oil/Lube Truck International	LHD12-DSL	Diesel	0.0060	0	0.0E+00	3	2.0E-02	4	2.0E-02	8	5.0E-02	8	5.0E-02	8	5.0E-02	7	4.0E-02	6	4.0E-02	5	3.0E-02	5	3.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	4	2.0E-02	0	0.0E+00	0	0.0E+00
Pickup Truck	LHD11-CAT	Gasoline	0.0006	4	2.0E-03	11	6.0E-03	15	9.0E-03	23	1.0E-02	30	2.0E-02	31	2.0E-02	29	2.0E-02	20	1.0E-02	15	9.0E-03	15	9.0E-03	15	9.0E-03	15	9.0E-03	15	9.0E-03	15	9.0E-03	15	9.0E-03	5	3.0E-03	5	3.0E-03	5	3.0E-03	5	3.0E-03	0	0.0E+00	0	0.0E+00
Water Truck	MHD0-DSL	Diesel	0.0150	1	1.0E-02	14	2.0E-01	26	4.0E-01	28	4.0E-01	26	4.0E-01	22	3.0E-01	20	3.0E-01	20	3.0E-01	34	5.0E-01	6	9.0E-02	6	9.0E-02	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00
Worker Vehicles	LHD11-CAT	Gasoline	0.0006	6	3.0E-03	14	8.0E-03	26	1.0E-02	56	3.0E-02	58	3.0E-02	69	4.0E-02	58	3.0E-02	48	3.0E-02	34	2.0E-02	27	2.0E-02	25	1.0E-02	31	2.0E-02	25	1.0E-02	21	1.0E-02	15	9.0E-03	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00

DAILY EMISSIONS SUMMARY - OFF-SITE ONROAD																																															
Equipment/Vehicle Type	Category	Fuel	Emission Factor (lb/mile)	DAILY EMISSIONS SUMMARY - OFF-SITE ONROAD																																											
				Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11		Month 12		Month 13		Month 14		Month 15		Month 16		Month 17		Month 18									
				m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day	m/day	lb/day				
Dump Truck	MHD0-DSL	Diesel	0.0150	35	5.0E-01	540	8.0E+00	1080	2.0E+01	1120	2.0E+01	850	1.0E+01	40	6.0E-01	120	2.0E+00	120	2.0E+00	120	2.0E+00	120	2.0E+00	120	2.0E+00	60	9.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00		
Flatbed Truck	MHD0-DSL	Diesel	0.0150	0	0.0E+00	0	0.0E+00	0	0.0E+00	36	5.0E-01	56	8.0E-01	82	1.0E+00	82	1.0E+00	116	2.0E+00	40	6.0E-01	40	6.0E-01	40	6.0E-01	40	6.0E-01	40	6.0E-01	13	2.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00		
18 Wheel Low Boy	MHD0-DSL	Diesel	0.0150	4	6.0E-02	6	9.0E-02	4	6.0E-02	10	1.0E-01	8	1.0E-01	8	1.0E-01	6	9.0E-02	12	2.0E-01	4	6.0E-02	0	0.0E+00	2	3.0E-02	2	3.0E-02	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00
Fuel Truck	MHD0-DSL	Diesel	0.0150	2	3.0E-02	12	2.0E-01	15	2.0E-01	38	6.0E-01	38	6.0E-01	30	4.0E-01	30	4.0E-01	25	4.0E-01	14	2.0E-01	14	2.0E-01	24	4.0E-01	12	2.0E-01	10	1.0E-01	20	3.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00
Bed/Mix Truck	MHD0-DSL	Diesel	0.0150	0	0.0E+00	0	0.0E+00	0	0.0E+00	24	4.0E-01	81	1.0E+00	383	5.0E+00	40	6.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00
Worker Vehicles	LHD11-CAT	Gasoline	0.0006	68	4.0E-02	165	9.0E-02	308	2.0E-01	675	4.0E-01	698	4.0E-01	833	5.0E-01	690	4.0E-01	870	5.0E-01	405	2.0E-01	323	2.0E-01	398	2.0E-01	300	2.0E-01	375	2.0E-01	390	2.0E-01	255	1.0E-01	180	1.0E-01	0	0.0E+00	0	0.0E+00	0	0.0E+00	0	0.0E+00				

Work Schedule
Days/Week 5
Week/Month 4
Days/Month 4

453.6 g/b

Peak Daily NOx Emissions Summary																		
Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	MAX
Offroad	7.15	21.57	36.68	64.94	61.62	54.26	51.79	34.96	26.01	21.91	23.64	20.62	27.70	28.59	23.38	17.55	0.00	0.00
Onsite Onroad	0.15	0.81																

Mitigated Offroad Emission Factors

Equipment/Vehicle Type	Model	Brake Horsepower (BHP)	Fuel Type	Load Factor
Construction Equipment				
Air Compressor Ingersol Rand	P65WK	23.5	Diesel	0.48
Backhoe	450E	124	Diesel	0.37
Concrete Pump Rig	B50	130	Diesel	0.74
Crane 20 Tn Grove	YB7722	130	Diesel	0.29
Dozer,Cat	D10T	580	Diesel	0.40
Forklift	DP45K	124	Diesel	0.20
Generator	XQ400	328	Diesel	0.74
Loader	972H	287	Diesel	0.37
Motor Grader	160M	213	Diesel	0.41
Paving Machine	AP1055D	224	Diesel	0.36
Roller	CB-534D	130	Diesel	0.38
Sheeps Foot	825G	315	Diesel	0.42

Source:

1. CalEEMod User's Guide, Appendix D Default Data Tables. September 2013 (Table 3.4 OFFROAD Equipment Emission Factors (g/bhp-hr).

2. Emission factors converted from gr/bhp-hr to lb/hr by multiplying values in Table 1a by equipment specific horsepower. The sum was then converted to pounds based on 453.6 grams per pound.

Offroad Emission Factors (g/bhp-hr) ¹							
ROG/VOC	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
g/bhp-hr							
1.481	5.604	2.600	0.007	0.371	0.371	568.299	0.133
0.354	3.200	2.600	0.005	0.197	0.182	493.912	0.151
0.376	2.975	2.600	0.006	0.159	0.159	568.299	0.033
0.696	3.787	2.600	0.005	0.397	0.366	501.093	0.154
0.526	2.767	2.600	0.005	0.260	0.239	499.367	0.153
0.508	3.452	2.600	0.005	0.294	0.270	498.334	0.153
0.224	1.048	2.600	0.005	0.076	0.076	568.299	0.020
0.272	1.739	2.600	0.005	0.122	0.112	497.113	0.152
0.396	1.449	2.600	0.005	0.180	0.166	503.802	0.154
0.288	1.333	2.600	0.005	0.142	0.130	498.732	0.153
0.314	2.981	2.600	0.005	0.180	0.166	497.909	0.153
0.290	2.121	2.600	0.005	0.138	0.127	501.130	0.154

Offroad Emission Factors (lb/hr) ²							
ROG/VOC	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
lb/hr							
0.04	0.14	0.06	0.00	0.01	0.01	14.13	0.00
0.04	0.32	0.26	0.00	0.02	0.02	49.96	0.02
0.08	0.63	0.55	0.00	0.03	0.03	120.53	0.01
0.06	0.31	0.22	0.00	0.03	0.03	41.65	0.01
0.27	1.42	1.33	0.00	0.13	0.12	255.41	0.08
0.03	0.19	0.14	0.00	0.02	0.01	27.25	0.01
0.12	0.56	1.39	0.00	0.04	0.04	304.10	0.01
0.06	0.41	0.61	0.00	0.03	0.03	116.38	0.04
0.08	0.28	0.50	0.00	0.03	0.03	97.00	0.03
0.05	0.24	0.46	0.00	0.03	0.02	88.66	0.03
0.03	0.32	0.28	0.00	0.02	0.02	54.23	0.02
0.08	0.62	0.76	0.00	0.04	0.04	146.16	0.04

Conversions

Value Units

453.6 g/lb

Table 13b: Onroad Emission Factors

EMFAC2011 Emission Rates

Region Type: Air Basin

Region: South Coast

Calendar Year: 2017

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUN	TOG_RUN	ECO_RUN	EXNOX_RUN	CO2_RUN	CO2_RUN	PM10_RUN	PM2_5_RUN	SUO2
South Coast	2017	Annual	LDA	GAS	Aggregatec	30	37364810	0.0	0.0	1.1	0.1	359.5	283.5	0.0	0.0	0.003
South Coast	2017	Annual	LDA	DSL	Aggregatec	30	123440.9	0.0	0.0	0.2	0.4	295.0	231.2	0.0	0.0	0.003
South Coast	2017	Annual	LDT1	GAS	Aggregatec	30	4311993	0.1	0.1	2.8	0.3	414.8	341.2	0.0	0.0	0.000
South Coast	2017	Annual	LDT1	DSL	Aggregatec	30	6197.638	0.1	0.1	0.3	0.5	308.4	243.9	0.1	0.1	0.000
South Coast	2017	Annual	LDT2	GAS	Aggregatec	30	13082342	0.0	0.1	1.5	0.2	489.8	412.0	0.0	0.0	0.000
South Coast	2017	Annual	LDT2	DSL	Aggregatec	30	6369.446	0.0	0.0	0.2	0.4	299.0	244.0	0.0	0.0	0.000
South Coast	2017	Annual	LHD1	GAS	Aggregatec	30	1542844	0.1	0.1	1.6	0.4	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	LHD1	DSL	Aggregatec	30	334463.7	0.2	0.2	0.9	2.8	521.9	495.8	0.0	0.0	0.000
South Coast	2017	Annual	LHD2	GAS	Aggregatec	30	164519.2	0.1	0.1	1.2	0.4	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	LHD2	DSL	Aggregatec	30	112434.2	0.2	0.2	0.8	2.7	523.1	496.9	0.0	0.0	0.000
South Coast	2017	Annual	MCY	GAS	Aggregatec	30	305995.9	2.1	2.3	16.2	1.1	145.3	138.0	0.0	0.0	0.000
South Coast	2017	Annual	MDV	GAS	Aggregatec	30	9928681	0.1	0.1	2.4	0.3	623.9	543.5	0.0	0.0	0.000
South Coast	2017	Annual	MDV	DSL	Aggregatec	30	10544.91	0.0	0.0	0.2	0.3	294.1	251.3	0.0	0.0	0.000
South Coast	2017	Annual	MH	GAS	Aggregatec	30	82374.13	0.1	0.2	3.9	0.6	619.4	588.5	0.0	0.0	0.000
South Coast	2017	Annual	MH	DSL	Aggregatec	30	11788.29	0.2	0.2	0.6	6.8	1227.7	1166.3	0.1	0.1	0.000