

4200 N. University Parkway Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**4200 N. University Parkway Project
San Bernardino-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	215.00	Space	1.93	86,000.00	0
Fast Food Restaurant with Drive Thru	14.46	1000sqft	0.33	14,458.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	531.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on 2019 Reported Factors

Land Use - Retail land use includes fast food restaurant with drive-through, coffee/donut shop with drive-through and automated car wash (with tunne)

Construction Phase - Based on preliminary construction schedule of April 2023 through February 2024

Grading - Conservative assumption of 7,600 cubic yards of import, based on current topography and pavement section.

Vehicle Trips - Based on total gross proposed project trip generation forecast of 5,196. Total net trips results in 3,896 (-1,300 pass-by trips).

Construction Off-road Equipment Mitigation - Fugitive Dust (Rule 403) Minimum requirements

Area Mitigation -

Water Mitigation -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True

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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialImported	0.00	7,600.00
tblLandUse	LandUseSquareFeet	14,460.00	14,458.00
tblProjectCharacteristics	CO2IntensityFactor	390.98	531.98
tblVehicleTrips	ST_TR	616.12	470.17
tblVehicleTrips	SU_TR	472.58	360.63
tblVehicleTrips	WD_TR	470.95	359.39

2.0 Emissions Summary

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	0.1827	1.4523	1.5378	3.3300e-003	0.0832	0.0610	0.1442	0.0270	0.0584	0.0853	0.0000	288.2789	288.2789	0.0416	9.0100e-003	292.0027
2024	0.1141	0.2564	0.3129	6.0000e-004	9.9600e-003	0.0107	0.0207	2.6800e-003	0.0102	0.0129	0.0000	51.7828	51.7828	8.7900e-003	7.9000e-004	52.2395
Maximum	0.1827	1.4523	1.5378	3.3300e-003	0.0832	0.0610	0.1442	0.0270	0.0584	0.0853	0.0000	288.2789	288.2789	0.0416	9.0100e-003	292.0027

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
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Year	tons/yr										MT/yr					
2023	0.1827	1.4523	1.5378	3.3300e-003	0.0700	0.0610	0.1310	0.0207	0.0584	0.0790	0.0000	288.2786	288.2786	0.0416	9.0100e-003	292.0024
2024	0.1141	0.2564	0.3129	6.0000e-004	9.9600e-003	0.0107	0.0207	2.6800e-003	0.0102	0.0129	0.0000	51.7828	51.7828	8.7900e-003	7.9000e-004	52.2394
Maximum	0.1827	1.4523	1.5378	3.3300e-003	0.0700	0.0610	0.1310	0.0207	0.0584	0.0790	0.0000	288.2786	288.2786	0.0416	9.0100e-003	292.0024

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	14.18	0.00	8.02	21.24	0.00	6.42	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	4-3-2023	7-2-2023	0.5758	0.5758
2	7-3-2023	10-2-2023	0.5317	0.5317
3	10-3-2023	1-2-2024	0.5319	0.5319
4	1-3-2024	4-2-2024	0.3576	0.3576
		Highest	0.5758	0.5758

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	0.0660	3.0000e-005	2.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.6900e-003	5.6900e-003	1.0000e-005	0.0000	6.0600e-003
Energy	0.0213	0.1932	0.1623	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	378.6701	378.6701	0.0145	5.1200e-003	380.5584
Mobile	1.7645	1.9020	12.3133	0.0210	2.1538	0.0184	2.1723	0.5753	0.0172	0.5925	0.0000	1,948.7108	1,948.7108	0.1757	0.1308	1,992.0826

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Waste						0.0000	0.0000		0.0000	0.0000	33.8102	0.0000	33.8102	1.9981	0.0000	83.7633
Water						0.0000	0.0000		0.0000	0.0000	1.3925	14.5416	15.9340	0.1439	3.4900e-003	20.5710
Total	1.8517	2.0952	12.4785	0.0222	2.1538	0.0331	2.1870	0.5753	0.0319	0.6072	35.2026	2,341.9282	2,377.1308	2.3322	0.1394	2,476.9812

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	0.0660	3.0000e-005	2.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.6900e-003	5.6900e-003	1.0000e-005	0.0000	6.0600e-003
Energy	0.0213	0.1932	0.1623	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	378.6701	378.6701	0.0145	5.1200e-003	380.5584
Mobile	1.7645	1.9020	12.3133	0.0210	2.1538	0.0184	2.1723	0.5753	0.0172	0.5925	0.0000	1,948.7108	1,948.7108	0.1757	0.1308	1,992.0826
Waste						0.0000	0.0000		0.0000	0.0000	33.8102	0.0000	33.8102	1.9981	0.0000	83.7633
Water						0.0000	0.0000		0.0000	0.0000	1.1140	11.7377	12.8516	0.1151	2.7900e-003	16.5616
Total	1.8517	2.0952	12.4785	0.0222	2.1538	0.0331	2.1870	0.5753	0.0319	0.6072	34.9241	2,339.1243	2,374.0484	2.3034	0.1387	2,472.9718

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.12	0.13	1.23	0.50	0.16

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/3/2023	4/10/2023	5	6	
2	Building Construction	Building Construction	4/11/2023	2/12/2024	5	220	
3	Paving	Paving	1/30/2024	2/12/2024	5	10	
4	Architectural Coating	Architectural Coating	1/30/2024	2/12/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6

Acres of Paving: 1.93

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,687; Non-Residential Outdoor: 7,229; Striped Parking Area: 5,160 (Architectural

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	950.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	42.00	16.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	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 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					0.0217	0.0000	0.0217	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0434	0.0261	6.0000e-005		1.8100e-003	1.8100e-003		1.6700e-003	1.6700e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	4.0000e-003	0.0434	0.0261	6.0000e-005	0.0217	1.8100e-003	0.0235	0.0103	1.6700e-003	0.0120	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751

Unmitigated Construction Off-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1100e-003	0.0553	0.0160	2.7000e-004	8.1800e-003	5.5000e-004	8.7300e-003	2.2500e-003	5.3000e-004	2.7700e-003	0.0000	26.3960	26.3960	1.1200e-003	4.1800e-003	27.6709
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	1.0000e-004	8.0000e-005	9.7000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2537	0.2537	1.0000e-005	1.0000e-005	0.2560
Total	1.2100e-003	0.0553	0.0170	2.7000e-004	8.5100e-003	5.5000e-004	9.0600e-003	2.3400e-003	5.3000e-004	2.8600e-003	0.0000	26.6497	26.6497	1.1300e-003	4.1900e-003	27.9269

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.4500e-003	0.0000	8.4500e-003	4.0300e-003	0.0000	4.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0434	0.0261	6.0000e-005		1.8100e-003	1.8100e-003		1.6700e-003	1.6700e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	4.0000e-003	0.0434	0.0261	6.0000e-005	8.4500e-003	1.8100e-003	0.0103	4.0300e-003	1.6700e-003	5.7000e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751

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
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Vendor	1.7000e-003	0.0558	0.0226	2.7000e-004	9.5400e-003	4.0000e-004	9.9400e-003	2.7500e-003	3.8000e-004	3.1300e-003	0.0000	26.3516	26.3516	6.9000e-004	3.8900e-003	27.5292
Worker	0.0138	0.0103	0.1288	3.7000e-004	0.0435	2.2000e-004	0.0437	0.0116	2.0000e-004	0.0118	0.0000	33.5679	33.5679	8.9000e-004	9.2000e-004	33.8651
Total	0.0155	0.0661	0.1514	6.4000e-004	0.0531	6.2000e-004	0.0537	0.0143	5.8000e-004	0.0149	0.0000	59.9195	59.9195	1.5800e-003	4.8100e-003	61.3943

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	0.1619	1.2875	1.3433	2.3600e-003		0.0580	0.0580		0.0556	0.0556	0.0000	196.2782	196.2782	0.0371	0.0000	197.2062
Total	0.1619	1.2875	1.3433	2.3600e-003		0.0580	0.0580		0.0556	0.0556	0.0000	196.2782	196.2782	0.0371	0.0000	197.2062

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	1.7000e-003	0.0558	0.0226	2.7000e-004	9.5400e-003	4.0000e-004	9.9400e-003	2.7500e-003	3.8000e-004	3.1300e-003	0.0000	26.3516	26.3516	6.9000e-004	3.8900e-003	27.5292
Worker	0.0138	0.0103	0.1288	3.7000e-004	0.0435	2.2000e-004	0.0437	0.0116	2.0000e-004	0.0118	0.0000	33.5679	33.5679	8.9000e-004	9.2000e-004	33.8651

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Total	0.0155	0.0661	0.1514	6.4000e-004	0.0531	6.2000e-004	0.0537	0.0143	5.8000e-004	0.0149	0.0000	59.9195	59.9195	1.5800e-003	4.8100e-003	61.3943
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3.3 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	0.0248	0.1988	0.2186	3.9000e-004		8.3400e-003	8.3400e-003		7.9900e-003	7.9900e-003	0.0000	32.1957	32.1957	6.0000e-003	0.0000	32.3456
Total	0.0248	0.1988	0.2186	3.9000e-004		8.3400e-003	8.3400e-003		7.9900e-003	7.9900e-003	0.0000	32.1957	32.1957	6.0000e-003	0.0000	32.3456

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	2.7000e-004	9.2300e-003	3.6400e-003	4.0000e-005	1.5600e-003	6.0000e-005	1.6300e-003	4.5000e-004	6.0000e-005	5.1000e-004	0.0000	4.2627	4.2627	1.1000e-004	6.3000e-004	4.4531
Worker	2.1100e-003	1.5000e-003	0.0197	6.0000e-005	7.1400e-003	3.0000e-005	7.1700e-003	1.9000e-003	3.0000e-005	1.9300e-003	0.0000	5.3461	5.3461	1.3000e-004	1.4000e-004	5.3912
Total	2.3800e-003	0.0107	0.0233	1.0000e-004	8.7000e-003	9.0000e-005	8.8000e-003	2.3500e-003	9.0000e-005	2.4400e-003	0.0000	9.6088	9.6088	2.4000e-004	7.7000e-004	9.8443

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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	0.0248	0.1988	0.2186	3.9000e-004		8.3400e-003	8.3400e-003		7.9900e-003	7.9900e-003	0.0000	32.1956	32.1956	6.0000e-003	0.0000	32.3455
Total	0.0248	0.1988	0.2186	3.9000e-004		8.3400e-003	8.3400e-003		7.9900e-003	7.9900e-003	0.0000	32.1956	32.1956	6.0000e-003	0.0000	32.3455

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	2.7000e-004	9.2300e-003	3.6400e-003	4.0000e-005	1.5600e-003	6.0000e-005	1.6300e-003	4.5000e-004	6.0000e-005	5.1000e-004	0.0000	4.2627	4.2627	1.1000e-004	6.3000e-004	4.4531
Worker	2.1100e-003	1.5000e-003	0.0197	6.0000e-005	7.1400e-003	3.0000e-005	7.1700e-003	1.9000e-003	3.0000e-005	1.9300e-003	0.0000	5.3461	5.3461	1.3000e-004	1.4000e-004	5.3912
Total	2.3800e-003	0.0107	0.0233	1.0000e-004	8.7000e-003	9.0000e-005	8.8000e-003	2.3500e-003	9.0000e-005	2.4400e-003	0.0000	9.6088	9.6088	2.4000e-004	7.7000e-004	9.8443

3.4 Paving - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Off-Road	4.2100e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7574	7.7574	2.4600e-003	0.0000	7.8188
Paving	2.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7400e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7574	7.7574	2.4600e-003	0.0000	7.8188

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	2.4000e-004	1.7000e-004	2.2600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6159	0.6159	2.0000e-005	2.0000e-005	0.6211
Total	2.4000e-004	1.7000e-004	2.2600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6159	0.6159	2.0000e-005	2.0000e-005	0.6211

Mitigated Construction On-Site

4200 N. University Parkway Project - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Off-Road	4.2100e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7573	7.7573	2.4600e-003	0.0000	7.8188
Paving	2.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7400e-003	0.0405	0.0585	9.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	7.7573	7.7573	2.4600e-003	0.0000	7.8188

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	2.4000e-004	1.7000e-004	2.2600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6159	0.6159	2.0000e-005	2.0000e-005	0.6211
Total	2.4000e-004	1.7000e-004	2.2600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6159	0.6159	2.0000e-005	2.0000e-005	0.6211

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Archit. Coating	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0799	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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	1.3000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3285	0.3285	1.0000e-005	1.0000e-005	0.3313
Total	1.3000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3285	0.3285	1.0000e-005	1.0000e-005	0.3313

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
Archit. Coating	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	0.0799	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784

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	1.3000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3285	0.3285	1.0000e-005	1.0000e-005	0.3313
Total	1.3000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3285	0.3285	1.0000e-005	1.0000e-005	0.3313

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	1.7645	1.9020	12.3133	0.0210	2.1538	0.0184	2.1723	0.5753	0.0172	0.5925	0.0000	1,948.7108	1,948.7108	0.1757	0.1308	1,992.0826
Unmitigated	1.7645	1.9020	12.3133	0.0210	2.1538	0.0184	2.1723	0.5753	0.0172	0.5925	0.0000	1,948.7108	1,948.7108	0.1757	0.1308	1,992.0826

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	5,196.78	6,798.66	5,214.71	5,712,550	5,712,550
Parking Lot	0.00	0.00	0.00		
Total	5,196.78	6,798.66	5,214.71	5,712,550	5,712,550

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total		0.0213	0.1932	0.1623	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.3664	210.3664	4.0300e-003	3.8600e-003	211.6166
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Mitigated

	Natural Gas 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					
Fast Food Restaurant with Drive-Thru Parking Lot	3.94212e+006	0.0213	0.1932	0.1623	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.3664	210.3664	4.0300e-003	3.8600e-003	211.6166
Drive-Thru Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0213	0.1932	0.1623	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.3664	210.3664	4.0300e-003	3.8600e-003	211.6166

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive-Thru Parking Lot	667381	161.0405	9.9900e-003	1.2100e-003	161.6511
Drive-Thru Parking Lot	30100	7.2632	4.5000e-004	5.0000e-005	7.2907
Total		168.3037	0.0104	1.2600e-003	168.9418

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	667381	161.0405	9.9900e-003	1.2100e-003	161.6511
Parking Lot	30100	7.2632	4.5000e-004	5.0000e-005	7.2907
Total		168.3037	0.0104	1.2600e-003	168.9418

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products	0.0578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	2.7000e-004	3.0000e-005	2.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.6900e-003	5.6900e-003	1.0000e-005	0.0000	6.0600e-003
Total	0.0660	3.0000e-005	2.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.6900e-003	5.6900e-003	1.0000e-005	0.0000	6.0600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.8516	0.1151	2.7900e-003	16.5616
Unmitigated	15.9340	0.1439	3.4900e-003	20.5710

7.2 Water by Land Use

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	4.3891 / 0.280155	15.9340	0.1439	3.4900e-003	20.5710
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		15.9340	0.1439	3.4900e-003	20.5710

Mitigated

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	3.51128 / 0.263066	12.8516	0.1151	2.7900e-003	16.5616
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		12.8516	0.1151	2.7900e-003	16.5616

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	33.8102	1.9981	0.0000	83.7633
Unmitigated	33.8102	1.9981	0.0000	83.7633

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive-Thru	166.56	33.8102	1.9981	0.0000	83.7633
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		33.8102	1.9981	0.0000	83.7633

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	166.56	33.8102	1.9981	0.0000	83.7633
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		33.8102	1.9981	0.0000	83.7633

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation