Appendix A

Air Quality and GHG Emissions

Architectural Coating Adjustment

CalEEMod Phase	Length in Days
Demolition	20
Site Preparation	3
Grading	6
Building Construction	220
Paving	10
Architectural Coating	10

CalEEMod Construction Phase Daily ROG Output (lb/day)
144.2526

Architechtural Coating Net ROG Emissions (lbs)
1442.526

Adjusted Architechtural Coating Days: *(2/3 building construction + paving + architectural coating)*	**Adjusted Daily Architectural Coating Emissions (lb/day):**
165.2	8.731997579

RJD Mental Health Crisis Facility

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	61.00	1000sqft	1.40	61,000.00	0
Parking Lot	95.00	Space	0.86	38,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	573	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor is from the San Diego County CAP for 2020, assuming achievement of 45.2% State Renewable Energy Targets

Land Use - Lot size where grading would occur is much larger than the building footprint. Additional sq footage is covered by the new parking lot (38,000 sq ft).

Demolition - Estimate based on satellite imagery (50*150 ft)

Vehicle Trips - Input project specific information from Traffic Study (334 average daily trips, 2 trips per employee, 2.74 employees per 1000 sq ft). 27.99 average VMT per employee from traffic study.

Energy Use -

Stationary Sources - Emergency Generators and Fire Pumps - Assuming power is out 10 full days per year

Energy Mitigation - Would exceed Title 24 requirements by 15%

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	720.49	573
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,200.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	240.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	7.30	13.99
tblVehicleTrips	CNW_TL	7.30	13.99
tblVehicleTrips	CW_TL	9.50	13.99
tblVehicleTrips	ST_TR	10.18	5.48
tblVehicleTrips	SU_TR	8.91	5.48
tblVehicleTrips	WD_TR	13.22	5.48

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					
2020	0.1034	0.8796	0.6804	1.3200e-003	0.0389	0.0440	0.0828	0.0145	0.0417	0.0562	0.0000	113.4816	113.4816	0.0220	0.0000	114.0312
2021	0.9064	1.4907	1.3487	2.6900e-003	0.0320	0.0696	0.1016	8.7100e-003	0.0666	0.0753	0.0000	230.3675	230.3675	0.0385	0.0000	231.3305
Maximum	**0.9064**	**1.4907**	**1.3487**	**2.6900e-003**	**0.0389**	**0.0696**	**0.1016**	**0.0145**	**0.0666**	**0.0753**	**0.0000**	**230.3675**	**230.3675**	**0.0385**	**0.0000**	**231.3305**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1034	0.8796	0.6804	1.3200e-003	0.0389	0.0440	0.0828	0.0145	0.0417	0.0562	0.0000	113.4815	113.4815	0.0220	0.0000	114.0311
2021	0.9064	1.4907	1.3487	2.6900e-003	0.0320	0.0696	0.1016	8.7100e-003	0.0666	0.0753	0.0000	230.3673	230.3673	0.0385	0.0000	231.3303
Maximum	**0.9064**	**1.4907**	**1.3487**	**2.6900e-003**	**0.0389**	**0.0696**	**0.1016**	**0.0145**	**0.0666**	**0.0753**	**0.0000**	**230.3673**	**230.3673**	**0.0385**	**0.0000**	**231.3303**

	ROG	NOx	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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**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	9-1-2020	11-30-2020	0.7316	0.7316
2	12-1-2020	2-28-2021	0.6626	0.6626
3	3-1-2021	5-31-2021	0.6558	0.6558
4	6-1-2021	8-31-2021	0.7956	0.7956
5	9-1-2021	9-30-2021	0.5207	0.5207
		Highest	0.7956	0.7956

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	0.3128	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003
Energy	0.0191	0.1733	0.1456	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	457.8803	457.8803	0.0172	6.2800e-003	460.1822
Mobile	0.1123	0.5294	1.5203	5.6400e-003	0.5085	4.6500e-003	0.5131	0.1362	4.3400e-003	0.1405	0.0000	520.4315	520.4315	0.0259	0.0000	521.0792
Stationary	0.2363	1.0568	0.6026	1.1400e-003		0.0348	0.0348		0.0348	0.0348	0.0000	109.6696	109.6696	0.0154	0.0000	110.0540
Waste						0.0000	0.0000		0.0000	0.0000	133.7305	0.0000	133.7305	7.9032	0.0000	331.3115
Water						0.0000	0.0000		0.0000	0.0000	2.4284	30.1142	32.5426	0.2509	6.2000e-003	40.6651
Total	**0.6805**	**1.7595**	**2.2699**	**7.8200e-003**	**0.5085**	**0.0526**	**0.5611**	**0.1362**	**0.0523**	**0.1884**	**136.1588**	**1,118.0984**	**1,254.2572**	**8.2127**	**0.0125**	**1,463.2949**

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	0.3128	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003
Energy	0.0166	0.1504	0.1264	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	417.8047	417.8047	0.0160	5.6600e-003	419.8921
Mobile	0.1123	0.5294	1.5203	5.6400e-003	0.5085	4.6500e-003	0.5131	0.1362	4.3400e-003	0.1405	0.0000	520.4315	520.4315	0.0259	0.0000	521.0792
Stationary	0.2363	1.0568	0.6026	1.1400e-003		0.0348	0.0348		0.0348	0.0348	0.0000	109.6696	109.6696	0.0154	0.0000	110.0540
Waste						0.0000	0.0000		0.0000	0.0000	133.7305	0.0000	133.7305	7.9032	0.0000	331.3115
Water						0.0000	0.0000		0.0000	0.0000	2.4284	30.1142	32.5426	0.2509	6.2000e-003	40.6651
Total	**0.6780**	**1.7366**	**2.2506**	**7.6800e-003**	**0.5085**	**0.0509**	**0.5593**	**0.1362**	**0.0505**	**0.1867**	**136.1588**	**1,078.0229**	**1,214.1817**	**8.2115**	**0.0119**	**1,423.0048**

	ROG	NOx	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	**0.37**	**1.30**	**0.85**	**1.79**	**0.00**	**3.31**	**0.31**	**0.00**	**3.33**	**0.92**	**0.00**	**3.58**	**3.20**	**0.02**	**4.97**	**2.75**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/28/2020	5	20	
2	Site Preparation	Site Preparation	9/29/2020	10/1/2020	5	3	
3	Grading	Grading	10/2/2020	10/9/2020	5	6	
4	Building Construction	Building Construction	10/10/2020	8/13/2021	5	220	
5	Paving	Paving	8/14/2021	8/27/2021	5	10	
6	Architectural Coating	Architectural Coating	8/28/2021	9/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 91,500; Non-Residential Outdoor: 30,500; Striped Parking Area: 2,280 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	34.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	35.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.7400e-003	0.0000	3.7400e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0677	21.0677	5.4200e-003	0.0000	21.2031
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**3.7400e-003**	**0.0115**	**0.0153**	**5.7000e-004**	**0.0108**	**0.0113**	**0.0000**	**21.0677**	**21.0677**	**5.4200e-003**	**0.0000**	**21.2031**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8400e-003	1.1100e-003	1.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.3111	1.3111	1.2000e-004	0.0000	1.3141
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.5000e-004	3.4800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9423	0.9423	3.0000e-005	0.0000	0.9431
Total	**6.2000e-004**	**5.1900e-003**	**4.5900e-003**	**2.0000e-005**	**1.3300e-003**	**3.0000e-005**	**1.3600e-003**	**3.6000e-004**	**2.0000e-005**	**3.7000e-004**	**0.0000**	**2.2535**	**2.2535**	**1.5000e-004**	**0.0000**	**2.2571**

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					3.7400e-003	0.0000	3.7400e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0676	21.0676	5.4200e-003	0.0000	21.2030
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**3.7400e-003**	**0.0115**	**0.0153**	**5.7000e-004**	**0.0108**	**0.0113**	**0.0000**	**21.0676**	**21.0676**	**5.4200e-003**	**0.0000**	**21.2030**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8400e-003	1.1100e-003	1.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.3111	1.3111	1.2000e-004	0.0000	1.3141
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.5000e-004	3.4800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9423	0.9423	3.0000e-005	0.0000	0.9431
Total	**6.2000e-004**	**5.1900e-003**	**4.5900e-003**	**2.0000e-005**	**1.3300e-003**	**3.0000e-005**	**1.3600e-003**	**3.6000e-004**	**2.0000e-005**	**3.7000e-004**	**0.0000**	**2.2535**	**2.2535**	**1.5000e-004**	**0.0000**	**2.2571**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4800e-003	0.0299	0.0169	4.0000e-005		1.1700e-003	1.1700e-003		1.0700e-003	1.0700e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.4800e-003**	**0.0299**	**0.0169**	**4.0000e-005**	**2.3900e-003**	**1.1700e-003**	**3.5600e-003**	**2.6000e-004**	**1.0700e-003**	**1.3300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0870	0.0870	0.0000	0.0000	0.0871
Total	**4.0000e-005**	**3.0000e-005**	**3.2000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0870**	**0.0870**	**0.0000**	**0.0000**	**0.0871**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4800e-003	0.0299	0.0169	4.0000e-005		1.1700e-003	1.1700e-003		1.0700e-003	1.0700e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.4800e-003**	**0.0299**	**0.0169**	**4.0000e-005**	**2.3900e-003**	**1.1700e-003**	**3.5600e-003**	**2.6000e-004**	**1.0700e-003**	**1.3300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0870	0.0870	0.0000	0.0000	0.0871
Total	**4.0000e-005**	**3.0000e-005**	**3.2000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0870**	**0.0870**	**0.0000**	**0.0000**	**0.0871**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7700e-003	0.0640	0.0298	6.0000e-005		2.9700e-003	2.9700e-003		2.7300e-003	2.7300e-003	0.0000	5.4333	5.4333	1.7600e-003	0.0000	5.4773
Total	**5.7700e-003**	**0.0640**	**0.0298**	**6.0000e-005**	**0.0197**	**2.9700e-003**	**0.0226**	**0.0101**	**2.7300e-003**	**0.0128**	**0.0000**	**5.4333**	**5.4333**	**1.7600e-003**	**0.0000**	**5.4773**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2175	0.2175	1.0000e-005	0.0000	0.2176
Total	**1.1000e-004**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2175**	**0.2175**	**1.0000e-005**	**0.0000**	**0.2176**

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7700e-003	0.0640	0.0298	6.0000e-005		2.9700e-003	2.9700e-003		2.7300e-003	2.7300e-003	0.0000	5.4333	5.4333	1.7600e-003	0.0000	5.4773
Total	**5.7700e-003**	**0.0640**	**0.0298**	**6.0000e-005**	**0.0197**	**2.9700e-003**	**0.0226**	**0.0101**	**2.7300e-003**	**0.0128**	**0.0000**	**5.4333**	**5.4333**	**1.7600e-003**	**0.0000**	**5.4773**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2175	0.2175	1.0000e-005	0.0000	0.2176
Total	**1.1000e-004**	**8.0000e-005**	**8.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2175**	**0.2175**	**1.0000e-005**	**0.0000**	**0.2176**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0675	0.5143	0.4395	7.4000e-004		0.0280	0.0280		0.0268	0.0268	0.0000	61.2551	61.2551	0.0124	0.0000	61.5659
Total	**0.0675**	**0.5143**	**0.4395**	**7.4000e-004**		**0.0280**	**0.0280**		**0.0268**	**0.0268**	**0.0000**	**61.2551**	**61.2551**	**0.0124**	**0.0000**	**61.5659**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-003	0.0538	0.0143	1.3000e-004	3.1300e-003	2.6000e-004	3.4000e-003	9.0000e-004	2.5000e-004	1.1600e-003	0.0000	12.4543	12.4543	9.5000e-004	0.0000	12.4781
Worker	3.8100e-003	2.8200e-003	0.0276	8.0000e-005	8.2800e-003	6.0000e-005	8.3400e-003	2.2000e-003	5.0000e-005	2.2600e-003	0.0000	7.4843	7.4843	2.2000e-004	0.0000	7.4900
Total	**5.6100e-003**	**0.0566**	**0.0419**	**2.1000e-004**	**0.0114**	**3.2000e-004**	**0.0117**	**3.1000e-003**	**3.0000e-004**	**3.4200e-003**	**0.0000**	**19.9386**	**19.9386**	**1.1700e-003**	**0.0000**	**19.9681**

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	0.0675	0.5143	0.4395	7.4000e-004		0.0280	0.0280		0.0268	0.0268	0.0000	61.2550	61.2550	0.0124	0.0000	61.5658
Total	**0.0675**	**0.5143**	**0.4395**	**7.4000e-004**		**0.0280**	**0.0280**		**0.0268**	**0.0268**	**0.0000**	**61.2550**	**61.2550**	**0.0124**	**0.0000**	**61.5658**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-003	0.0538	0.0143	1.3000e-004	3.1300e-003	2.6000e-004	3.4000e-003	9.0000e-004	2.5000e-004	1.1600e-003	0.0000	12.4543	12.4543	9.5000e-004	0.0000	12.4781
Worker	3.8100e-003	2.8200e-003	0.0276	8.0000e-005	8.2800e-003	6.0000e-005	8.3400e-003	2.2000e-003	5.0000e-005	2.2600e-003	0.0000	7.4843	7.4843	2.2000e-004	0.0000	7.4900
Total	**5.6100e-003**	**0.0566**	**0.0419**	**2.1000e-004**	**0.0114**	**3.2000e-004**	**0.0117**	**3.1000e-003**	**3.0000e-004**	**3.4200e-003**	**0.0000**	**19.9386**	**19.9386**	**1.1700e-003**	**0.0000**	**19.9681**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1646	1.2902	1.1723	2.0100e-003		0.0658	0.0658		0.0630	0.0630	0.0000	167.1572	167.1572	0.0329	0.0000	167.9794
Total	**0.1646**	**1.2902**	**1.1723**	**2.0100e-003**		**0.0658**	**0.0658**		**0.0630**	**0.0630**	**0.0000**	**167.1572**	**167.1572**	**0.0329**	**0.0000**	**167.9794**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9800e-003	0.1324	0.0353	3.5000e-004	8.5500e-003	2.8000e-004	8.8300e-003	2.4700e-003	2.7000e-004	2.7400e-003	0.0000	33.6735	33.6735	2.5000e-003	0.0000	33.7360
Worker	9.7900e-003	6.9900e-003	0.0704	2.2000e-004	0.0226	1.6000e-004	0.0228	6.0000e-003	1.5000e-004	6.1500e-003	0.0000	19.7372	19.7372	5.7000e-004	0.0000	19.7514
Total	**0.0138**	**0.1394**	**0.1057**	**5.7000e-004**	**0.0311**	**4.4000e-004**	**0.0316**	**8.4700e-003**	**4.2000e-004**	**8.8900e-003**	**0.0000**	**53.4107**	**53.4107**	**3.0700e-003**	**0.0000**	**53.4873**

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	0.1646	1.2902	1.1723	2.0100e-003		0.0658	0.0658		0.0630	0.0630	0.0000	167.1570	167.1570	0.0329	0.0000	167.9792
Total	**0.1646**	**1.2902**	**1.1723**	**2.0100e-003**		**0.0658**	**0.0658**		**0.0630**	**0.0630**	**0.0000**	**167.1570**	**167.1570**	**0.0329**	**0.0000**	**167.9792**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9800e-003	0.1324	0.0353	3.5000e-004	8.5500e-003	2.8000e-004	8.8300e-003	2.4700e-003	2.7000e-004	2.7400e-003	0.0000	33.6735	33.6735	2.5000e-003	0.0000	33.7360
Worker	9.7900e-003	6.9900e-003	0.0704	2.2000e-004	0.0226	1.6000e-004	0.0228	6.0000e-003	1.5000e-004	6.1500e-003	0.0000	19.7372	19.7372	5.7000e-004	0.0000	19.7514
Total	**0.0138**	**0.1394**	**0.1057**	**5.7000e-004**	**0.0311**	**4.4000e-004**	**0.0316**	**8.4700e-003**	**4.2000e-004**	**8.8900e-003**	**0.0000**	**53.4107**	**53.4107**	**3.0700e-003**	**0.0000**	**53.4873**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3200e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4500e-003**	**0.0532**	**0.0589**	**9.0000e-005**		**2.9100e-003**	**2.9100e-003**		**2.6900e-003**	**2.6900e-003**	**0.0000**	**7.7524**	**7.7524**	**2.4600e-003**	**0.0000**	**7.8138**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	1.8700e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5254	0.5254	2.0000e-005	0.0000	0.5258
Total	**2.6000e-004**	**1.9000e-004**	**1.8700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5254**	**0.5254**	**2.0000e-005**	**0.0000**	**0.5258**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3200e-003	0.0532	0.0589	9.0000e-005		2.9100e-003	2.9100e-003		2.6900e-003	2.6900e-003	0.0000	7.7524	7.7524	2.4600e-003	0.0000	7.8138
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4500e-003**	**0.0532**	**0.0589**	**9.0000e-005**		**2.9100e-003**	**2.9100e-003**		**2.6900e-003**	**2.6900e-003**	**0.0000**	**7.7524**	**7.7524**	**2.4600e-003**	**0.0000**	**7.8138**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	1.8700e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5254	0.5254	2.0000e-005	0.0000	0.5258
Total	**2.6000e-004**	**1.9000e-004**	**1.8700e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5254**	**0.5254**	**2.0000e-005**	**0.0000**	**0.5258**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.7211**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.7000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2452	0.2452	1.0000e-005	0.0000	0.2454
Total	**1.2000e-004**	**9.0000e-005**	**8.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2452**	**0.2452**	**1.0000e-005**	**0.0000**	**0.2454**

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	0.7201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**0.7211**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	8.7000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2452	0.2452	1.0000e-005	0.0000	0.2454
Total	**1.2000e-004**	**9.0000e-005**	**8.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2452**	**0.2452**	**1.0000e-005**	**0.0000**	**0.2454**

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	0.1123	0.5294	1.5203	5.6400e-003	0.5085	4.6500e-003	0.5131	0.1362	4.3400e-003	0.1405	0.0000	520.4315	520.4315	0.0259	0.0000	521.0792
Unmitigated	0.1123	0.5294	1.5203	5.6400e-003	0.5085	4.6500e-003	0.5131	0.1362	4.3400e-003	0.1405	0.0000	520.4315	520.4315	0.0259	0.0000	521.0792

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	334.28	334.28	334.28	1,349,296	1,349,296
Parking Lot	0.00	0.00	0.00		
Total	334.28	334.28	334.28	1,349,296	1,349,296

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
Hospital	13.99	13.99	13.99	64.90	16.10	19.00	73	25	2
Parking Lot	9.50	7.30	7.30	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
Hospital	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	254.0279	254.0279	0.0129	2.6600e-003	255.1420
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	269.1768	269.1768	0.0136	2.8200e-003	270.3573
NaturalGas Mitigated	0.0166	0.1504	0.1264	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	163.7769	163.7769	3.1400e-003	3.0000e-003	164.7501
NaturalGas Unmitigated	0.0191	0.1733	0.1456	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.7035	188.7035	3.6200e-003	3.4600e-003	189.8249

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					
Hospital	3.53617e+006	0.0191	0.1733	0.1456	1.0400e-003		0.0132	0.0132		0.0132	0.0132	0.0000	188.7035	188.7035	3.6200e-003	3.4600e-003	189.8249
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		**0.0191**	**0.1733**	**0.1456**	**1.0400e-003**		**0.0132**	**0.0132**		**0.0132**	**0.0132**	**0.0000**	**188.7035**	**188.7035**	**3.6200e-003**	**3.4600e-003**	**189.8249**

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					
Hospital	3.06906e+006	0.0166	0.1504	0.1264	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	163.7769	163.7769	3.1400e-003	3.0000e-003	164.7501
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		**0.0166**	**0.1504**	**0.1264**	**9.0000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**163.7769**	**163.7769**	**3.1400e-003**	**3.0000e-003**	**164.7501**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.02236e+006	265.7200	0.0135	2.7800e-003	266.8854
Parking Lot	13300	3.4568	1.7000e-004	4.0000e-005	3.4719
Total		**269.1768**	**0.0136**	**2.8200e-003**	**270.3573**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	964075	250.5711	0.0127	2.6200e-003	251.6700
Parking Lot	13300	3.4568	1.7000e-004	4.0000e-005	3.4719
Total		**254.0279**	**0.0129**	**2.6600e-003**	**255.1420**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3128	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003
Unmitigated	0.3128	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003

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	0.0720					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003
Total	**0.3128**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7900e-003**	**2.7900e-003**	**1.0000e-005**	**0.0000**	**2.9700e-003**

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	0.0720					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7900e-003	2.7900e-003	1.0000e-005	0.0000	2.9700e-003
Total	**0.3128**	**1.0000e-005**	**1.4400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7900e-003**	**2.7900e-003**	**1.0000e-005**	**0.0000**	**2.9700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	32.5426	0.2509	6.2000e-003	40.6651
Unmitigated	32.5426	0.2509	6.2000e-003	40.6651

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	7.65431 / 1.45796	32.5426	0.2509	6.2000e-003	40.6651
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**32.5426**	**0.2509**	**6.2000e-003**	**40.6651**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	7.65431 / 1.45796	32.5426	0.2509	6.2000e-003	40.6651
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**32.5426**	**0.2509**	**6.2000e-003**	**40.6651**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	133.7305	7.9032	0.0000	331.3115
Unmitigated	133.7305	7.9032	0.0000	331.3115

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	658.8	133.7305	7.9032	0.0000	331.3115
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**133.7305**	**7.9032**	**0.0000**	**331.3115**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	658.8	133.7305	7.9032	0.0000	331.3115
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**133.7305**	**7.9032**	**0.0000**	**331.3115**

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
Emergency Generator	1	0	240	1200	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.2363	1.0568	0.6026	1.1400e-003		0.0348	0.0348		0.0348	0.0348	0.0000	109.6696	109.6696	0.0154	0.0000	110.0540
Total	**0.2363**	**1.0568**	**0.6026**	**1.1400e-003**		**0.0348**	**0.0348**		**0.0348**	**0.0348**	**0.0000**	**109.6696**	**109.6696**	**0.0154**	**0.0000**	**110.0540**

11.0 Vegetation

RJD Mental Health Crisis Facility

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	61.00	1000sqft	1.40	61,000.00	0
Parking Lot	95.00	Space	0.86	38,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	573	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor is from the San Diego County CAP for 2020, assuming achievement of 45.2% State Renewable Energy Targets

Land Use - Lot size where grading would occur is much larger than the building footprint. Additional sq footage is covered by the new parking lot (38,000 sq ft).

Demolition - Estimate based on satellite imagery (50*150 ft)

Vehicle Trips - Input project specific information from Traffic Study (334 average daily trips, 2 trips per employee, 2.74 employees per 1000 sq ft). 27.99 average VMT per employee from traffic study.

Energy Use -

Stationary Sources - Emergency Generators and Fire Pumps - Assuming power is out 10 full days per year

Energy Mitigation - Would exceed Title 24 requirements by 15%

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	720.49	573
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,200.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	240.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	7.30	13.99
tblVehicleTrips	CNW_TL	7.30	13.99
tblVehicleTrips	CW_TL	9.50	13.99
tblVehicleTrips	ST_TR	10.18	5.48
tblVehicleTrips	SU_TR	8.91	5.48
tblVehicleTrips	WD_TR	13.22	5.48

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.4761	21.4527	16.3489	0.0324	6.6345	1.1548	7.6252	3.3893	1.0783	4.3008	0.0000	3,054.3133	3,054.3133	0.7695	0.0000	3,067.0148
2021	144.2526	17.7354	15.9065	0.0322	0.3958	0.8227	1.2185	0.1074	0.7882	0.8956	0.0000	3,040.1530	3,040.1530	0.5452	0.0000	3,052.4471
Maximum	**144.2526**	**21.4527**	**16.3489**	**0.0324**	**6.6345**	**1.1548**	**7.6252**	**3.3893**	**1.0783**	**4.3008**	**0.0000**	**3,054.3133**	**3,054.3133**	**0.7695**	**0.0000**	**3,067.0148**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.4761	21.4527	16.3489	0.0324	6.6345	1.1548	7.6252	3.3893	1.0783	4.3008	0.0000	3,054.3133	3,054.3133	0.7695	0.0000	3,067.0148
2021	144.2526	17.7354	15.9065	0.0322	0.3958	0.8227	1.2185	0.1074	0.7882	0.8956	0.0000	3,040.1529	3,040.1529	0.5452	0.0000	3,052.4471
Maximum	**144.2526**	**21.4527**	**16.3489**	**0.0324**	**6.6345**	**1.1548**	**7.6252**	**3.3893**	**1.0783**	**4.3008**	**0.0000**	**3,054.3133**	**3,054.3133**	**0.7695**	**0.0000**	**3,067.0148**

	ROG	NOx	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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7149	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364
Energy	0.1045	0.9498	0.7979	5.7000e-003		0.0722	0.0722		0.0722	0.0722		1,139.7808	1,139.7808	0.0219	0.0209	1,146.5540
Mobile	0.6480	2.8072	8.7266	0.0324	2.8610	0.0255	2.8865	0.7646	0.0238	0.7885		3,292.0380	3,292.0380	0.1588		3,296.0078
Stationary	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	**2.4674**	**3.7572**	**9.5404**	**0.0381**	**2.8610**	**0.0978**	**2.9588**	**0.7646**	**0.0961**	**0.8607**		**4,431.8530**	**4,431.8530**	**0.1807**	**0.0209**	**4,442.5981**

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	lb/day										lb/day					
Area	1.7149	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364
Energy	0.0907	0.8244	0.6925	4.9500e-003		0.0627	0.0627		0.0627	0.0627		989.2224	989.2224	0.0190	0.0181	995.1009
Mobile	0.6480	2.8072	8.7266	0.0324	2.8610	0.0255	2.8865	0.7646	0.0238	0.7885		3,292.0380	3,292.0380	0.1588		3,296.0078
Stationary	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	**2.4536**	**3.6317**	**9.4350**	**0.0374**	**2.8610**	**0.0882**	**2.9492**	**0.7646**	**0.0865**	**0.8512**		**4,281.2946**	**4,281.2946**	**0.1778**	**0.0181**	**4,291.1450**

	ROG	NOx	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	**0.56**	**3.34**	**1.10**	**1.97**	**0.00**	**9.76**	**0.32**	**0.00**	**9.93**	**1.11**	**0.00**	**3.40**	**3.40**	**1.60**	**13.21**	**3.41**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/28/2020	5	20	
2	Site Preparation	Site Preparation	9/29/2020	10/1/2020	5	3	
3	Grading	Grading	10/2/2020	10/9/2020	5	6	
4	Building Construction	Building Construction	10/10/2020	8/13/2021	5	220	
5	Paving	Paving	8/14/2021	8/27/2021	5	10	
6	Architectural Coating	Architectural Coating	8/28/2021	9/10/2021	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 91,500; Non-Residential Outdoor: 30,500; Striped Parking Area: 2,280 (Architectural Coating – sqft)

OffRoad Equipment

RJD Mental Health Crisis Facility - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	34.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	35.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3737	0.0000	0.3737	0.0566	0.0000	0.0566			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761		2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**0.3737**	**1.1525**	**1.5262**	**0.0566**	**1.0761**	**1.1327**		**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0134	0.4742	0.1077	1.3300e-003	0.0297	1.5100e-003	0.0312	8.1400e-003	1.4500e-003	9.5900e-003		145.5755	145.5755	0.0128		145.8961
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0611**	**0.5064**	**0.4762**	**2.4300e-003**	**0.1365**	**2.2600e-003**	**0.1388**	**0.0365**	**2.1400e-003**	**0.0386**		**255.1327**	**255.1327**	**0.0161**		**255.5350**

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					0.3737	0.0000	0.3737	0.0566	0.0000	0.0566			0.0000			0.0000
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761	0.0000	2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**	**0.3737**	**1.1525**	**1.5262**	**0.0566**	**1.0761**	**1.1327**	**0.0000**	**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0134	0.4742	0.1077	1.3300e-003	0.0297	1.5100e-003	0.0312	8.1400e-003	1.4500e-003	9.5900e-003		145.5755	145.5755	0.0128		145.8961
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0611**	**0.5064**	**0.4762**	**2.4300e-003**	**0.1365**	**2.2600e-003**	**0.1388**	**0.0365**	**2.1400e-003**	**0.0386**		**255.1327**	**255.1327**	**0.0161**		**255.5350**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149		2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**1.5908**	**0.7771**	**2.3678**	**0.1718**	**0.7149**	**0.8867**		**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		67.4198	67.4198	2.0100e-003		67.4701
Total	**0.0294**	**0.0198**	**0.2268**	**6.8000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**67.4198**	**67.4198**	**2.0100e-003**		**67.4701**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149	0.0000	2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**1.5908**	**0.7771**	**2.3678**	**0.1718**	**0.7149**	**0.8867**	**0.0000**	**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		67.4198	67.4198	2.0100e-003		67.4701
Total	**0.0294**	**0.0198**	**0.2268**	**6.8000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**67.4198**	**67.4198**	**2.0100e-003**		**67.4701**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110		1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**6.5523**	**0.9902**	**7.5425**	**3.3675**	**0.9110**	**4.2784**		**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	**0.0367**	**0.0247**	**0.2835**	**8.5000e-004**	**0.0822**	**5.8000e-004**	**0.0827**	**0.0218**	**5.3000e-004**	**0.0223**		**84.2747**	**84.2747**	**2.5200e-003**		**84.3376**

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110	0.0000	1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**6.5523**	**0.9902**	**7.5425**	**3.3675**	**0.9110**	**4.2784**	**0.0000**	**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	**0.0367**	**0.0247**	**0.2835**	**8.5000e-004**	**0.0822**	**5.8000e-004**	**0.0827**	**0.0218**	**5.3000e-004**	**0.0223**		**84.2747**	**84.2747**	**2.5200e-003**		**84.3376**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.8041	0.4596	4.3800e-003	0.1083	8.8300e-003	0.1171	0.0312	8.4400e-003	0.0396		470.4641	470.4641	0.0347		471.3318
Worker	0.1284	0.0865	0.9921	2.9600e-003	0.2875	2.0200e-003	0.2895	0.0763	1.8600e-003	0.0781		294.9615	294.9615	8.8100e-003		295.1817
Total	**0.1882**	**1.8907**	**1.4517**	**7.3400e-003**	**0.3958**	**0.0109**	**0.4067**	**0.1074**	**0.0103**	**0.1177**		**765.4256**	**765.4256**	**0.0435**		**766.5134**

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	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.8041	0.4596	4.3800e-003	0.1083	8.8300e-003	0.1171	0.0312	8.4400e-003	0.0396		470.4641	470.4641	0.0347		471.3318
Worker	0.1284	0.0865	0.9921	2.9600e-003	0.2875	2.0200e-003	0.2895	0.0763	1.8600e-003	0.0781		294.9615	294.9615	8.8100e-003		295.1817
Total	**0.1882**	**1.8907**	**1.4517**	**7.3400e-003**	**0.3958**	**0.0109**	**0.4067**	**0.1074**	**0.0103**	**0.1177**		**765.4256**	**765.4256**	**0.0435**		**766.5134**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.6293	0.4152	4.3300e-003	0.1083	3.4200e-003	0.1117	0.0312	3.2700e-003	0.0345		466.1631	466.1631	0.0333		466.9958
Worker	0.1211	0.0787	0.9283	2.8600e-003	0.2875	1.9900e-003	0.2895	0.0763	1.8300e-003	0.0781		285.0543	285.0543	8.1400e-003		285.2577
Total	**0.1694**	**1.7079**	**1.3435**	**7.1900e-003**	**0.3958**	**5.4100e-003**	**0.4012**	**0.1074**	**5.1000e-003**	**0.1125**		**751.2174**	**751.2174**	**0.0415**		**752.2535**

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0484	1.6293	0.4152	4.3300e-003	0.1083	3.4200e-003	0.1117	0.0312	3.2700e-003	0.0345		466.1631	466.1631	0.0333		466.9958
Worker	0.1211	0.0787	0.9283	2.8600e-003	0.2875	1.9900e-003	0.2895	0.0763	1.8300e-003	0.0781		285.0543	285.0543	8.1400e-003		285.2577
Total	**0.1694**	**1.7079**	**1.3435**	**7.1900e-003**	**0.3958**	**5.4100e-003**	**0.4012**	**0.1074**	**5.1000e-003**	**0.1125**		**751.2174**	**751.2174**	**0.0415**		**752.2535**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.2253					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2886**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.2253					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2886**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	144.0095					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**144.2284**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0157	0.1857	5.7000e-004	0.0575	4.0000e-004	0.0579	0.0153	3.7000e-004	0.0156		57.0109	57.0109	1.6300e-003		57.0515
Total	**0.0242**	**0.0157**	**0.1857**	**5.7000e-004**	**0.0575**	**4.0000e-004**	**0.0579**	**0.0153**	**3.7000e-004**	**0.0156**		**57.0109**	**57.0109**	**1.6300e-003**		**57.0515**

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	144.0095					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**144.2284**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0242	0.0157	0.1857	5.7000e-004	0.0575	4.0000e-004	0.0579	0.0153	3.7000e-004	0.0156		57.0109	57.0109	1.6300e-003		57.0515
Total	**0.0242**	**0.0157**	**0.1857**	**5.7000e-004**	**0.0575**	**4.0000e-004**	**0.0579**	**0.0153**	**3.7000e-004**	**0.0156**		**57.0109**	**57.0109**	**1.6300e-003**		**57.0515**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6480	2.8072	8.7266	0.0324	2.8610	0.0255	2.8865	0.7646	0.0238	0.7885		3,292.0380	3,292.0380	0.1588		3,296.0078
Unmitigated	0.6480	2.8072	8.7266	0.0324	2.8610	0.0255	2.8865	0.7646	0.0238	0.7885		3,292.0380	3,292.0380	0.1588		3,296.0078

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	334.28	334.28	334.28	1,349,296	1,349,296
Parking Lot	0.00	0.00	0.00		
Total	334.28	334.28	334.28	1,349,296	1,349,296

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
Hospital	13.99	13.99	13.99	64.90	16.10	19.00	73	25	2
Parking Lot	9.50	7.30	7.30	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
Hospital	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0907	0.8244	0.6925	4.9500e-003		0.0627	0.0627		0.0627	0.0627		989.2224	989.2224	0.0190	0.0181	995.1009
NaturalGas Unmitigated	0.1045	0.9498	0.7979	5.7000e-003		0.0722	0.0722		0.0722	0.0722		1,139.7808	1,139.7808	0.0219	0.0209	1,146.5540

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					
Hospital	9688.14	0.1045	0.9498	0.7979	5.7000e-003		0.0722	0.0722		0.0722	0.0722		1,139.7808	1,139.7808	0.0219	0.0209	1,146.5540
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
Total		**0.1045**	**0.9498**	**0.7979**	**5.7000e-003**		**0.0722**	**0.0722**		**0.0722**	**0.0722**		**1,139.7808**	**1,139.7808**	**0.0219**	**0.0209**	**1,146.5540**

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					
Hospital	8.40839	0.0907	0.8244	0.6925	4.9500e-003		0.0627	0.0627		0.0627	0.0627		989.2224	989.2224	0.0190	0.0181	995.1009
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
Total		**0.0907**	**0.8244**	**0.6925**	**4.9500e-003**		**0.0627**	**0.0627**		**0.0627**	**0.0627**		**989.2224**	**989.2224**	**0.0190**	**0.0181**	**995.1009**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7149	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364
Unmitigated	1.7149	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364

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	0.3946					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4800e-003	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364
Total	**1.7149**	**1.5000e-004**	**0.0160**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0341**	**0.0341**	**9.0000e-005**		**0.0364**

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	0.3946					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3189					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4800e-003	1.5000e-004	0.0160	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0341	0.0341	9.0000e-005		0.0364
Total	**1.7149**	**1.5000e-004**	**0.0160**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0341**	**0.0341**	**9.0000e-005**		**0.0364**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	240	1200	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (750 - 9999 HP)	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

Appendix B

Energy Consumption

Construction Fuel Use

Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Average Daily Factor	Diesel Fuel Usage
Site Preparation	Scraper	1	8.00	247	0.4	3	0.6	71
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37	3	0.6	23
Site Preparation	Graders	1	8.00	187	0.41	3	0.6	55
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73	20	0.6	284
Demolition	Rubber Tired Dozers	1	8.00	247	0.4	20	0.6	474
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37	20	0.6	517
Grading	Graders	1	8.00	187	0.41	6	0.6	110
Grading	Rubber Tired Dozers	1	8.00	247	0.40	6	0.6	142
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37	6	0.6	90
Building Construction	Cranes	1	8.00	231	0.29	220	0.6	3,537
Building Construction	Forklifts	2	7.00	89	0.20	220	0.6	1,645
Building Construction	Generator Sets	1	8.00	84	0.74	220	0.6	3,282
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37	220	0.6	1,421
Building Construction	Welders	3	8.00	46	0.45	220	0.6	3,279
Paving	Pavers	1	8.00	130	0.42	10	0.6	131
Paving	Paving Equipment	1	8.00	132	0.36	10	0.6	114
Paving	Cement and Mortar Mixers	1	8.00	9	0.56	10	0.6	12
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37	10	0.6	86
Paving	Rollers	2	8.00	80	0.38	10	0.6	146
Architectural Coating	Air Compressors	1	6.00	78	0.48	10	0.6	67
							TOTAL	**15,488**

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Average Daily Factor	**Total gallons of gasoline (on-road)**	**Total gallons of diesel (on-road)**
Site Preparation	8	0	0	10	80	0	0	14.70	6.90	20.00	1176	0	0	0.6	18,934	0
Demolition	13	0	1.7	20	260	0	34	14.70	6.90	20.00	3822	0	680	0.6	61,534	2,124
Grading	10	0	0	20	200	0	0	14.70	6.90	20.00	2940	0	0	0.6	47,334	0
Building Construction	35	16	0	230	8050	3680	0	14.70	6.90	20.00	118335	25392	0	0.6	1,905,196	79,297
Paving	15	0	0	20	300	0	0	14.70	6.90	20.00	4410	0	0	0.6	71,001	0
Architectural Coating	7	0	0	20	140	0	0	14.70	6.90	20.00	2058	0	0	0.6	33,134	0
														TOTAL	**2,137,133**	**81,421**
															(+ off-road equipment)	**96,908**

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: San Diego
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 00 gallons/	Diesel gas 00 gallons/	Miles per gallon	Gasoline miles per	Diesel miles per
San Diego	2020	LDA	Aggregated	Aggregated	GAS	1374512	53431843	6486947	1797.9768	0.00	29.72	26.83	5.20
San Diego	2020	LDT1	Aggregated	Aggregated	GAS	166319.3	5889126	755001.2	235.17154	0.00	25.04		
San Diego	2020	LDT2	Aggregated	Aggregated	GAS	490412.8	18096267	2279627	791.7467	0.00	22.86		
San Diego	2020	T7 tractor	Aggregated	Aggregated	DSL	902.6913	63437	4081.032	0.00	12.187992	5.20		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Operational Fuel Use

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: San Diego
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Model Year and Speed: Aggregated
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	VehClass	Fuel	Population	VMT (mi/day)	% of vehicle class EMFAC	% CalEEMod vehicle class	% project vehicle class	VMT by project vehicle class (mi/yr)	Gallons of fuel	Fuel_Consumption (1000 gal/day)	Fuel (gal/day)	mi/gal
San Diego	HHDT	GAS	144.6595242	19334.224	0.009610881	0.023976	0.00023043	393.1444565	81.72046565	4.018883548	4018.883548	4.810844547
San Diego	HHDT	DSL	14671.69867	1992367.34	0.990389119	0.023976	0.02374557	40513.03921	6940.776302	341.3364262	341336.4262	5.836960802
San Diego	LDA	GAS	1360303.239	47200227.72	0.939715722	0.598645	0.562556118	959794.1233	32066.94635	1576.970658	1576970.658	29.93094861
San Diego	LDA	DSL	16436.74621	573988.7279	0.011427619	0.598645	0.006841087	11671.78707	308.6318012	15.17772504	15177.72504	37.81783676
San Diego	LDA	ELEC	53031.766	2453981.955	0.048856659	0.598645	0.029247795	49900.55287	0	0	0	0
San Diego	LDT1	GAS	111279.0693	3429502.532	0.998676184	0.040929	0.040874818	69737.7708	2840.034122	139.664691	139664.691	24.55525808
San Diego	LDT1	DSL	158.1805408	3243.026298	0.000944374	0.040929	3.86523E-05	65.94583983	2.447736773	0.120372638	120.3726383	26.94155702
San Diego	LDT1	ELEC	41.01717021	1303.023624	0.000379442	0.040929	1.55302E-05	26.49654345	0	0	0	0
San Diego	LDT2	GAS	428827.6654	15161162.33	0.997931911	0.181073	0.180698525	308295.2557	13840.05733	680.6181797	680618.1797	22.2755765
San Diego	LDT2	DSL	838.0884277	31419.60641	0.002068089	0.181073	0.000374475	638.9032307	21.99234966	1.081526806	1081.526806	29.05115826
San Diego	LHDT1	GAS	20157.99378	562420.1125	0.42740948	0.015683	0.006703063	11436.29967	1179.36316	57.99931627	57999.31627	9.697012804
San Diego	LHDT1	DSL	23321.96226	753461.1195	0.57259052	0.015683	0.008979937	15320.94418	861.2941286	42.35715702	42357.15702	17.78828355
San Diego	LHDT2	GAS	4108.8208	143669.1591	0.312521989	0.005479	0.001712308	2921.420779	328.3850926	16.14926904	16149.26904	8.896325822
San Diego	LHDT2	DSL	8498.569967	316039.803	0.687478011	0.005479	0.003766692	6426.467957	397.7415426	19.56006933	19560.06933	16.15739687
San Diego	MCY	GAS	68595.68344	504731.8099	1	0.006016	0.006016	10264.08079	291.0566021	14.31258469	14312.58469	35.26489594
San Diego	MDV	GAS	269044.1313	8719960.001	0.979088175	0.106149	0.103929231	177316.8251	10694.1684	525.9101648	525910.1648	16.58070253
San Diego	MDV	DSL	4824.321421	186245.0021	0.020911825	0.106149	0.002219769	3787.21605	166.7641313	8.201007171	8201.007171	22.71001576
San Diego	MH	GAS	9893.769026	74246.43795	0.788478392	0.001122	0.000884673	1509.367127	228.7277946	11.25122159	11251.22159	6.59896682
San Diego	MH	DSL	2520.948671	19917.76322	0.211521608	0.001122	0.000237327	404.9112374	42.34326262	2.082883855	2082.883855	9.562589474
San Diego	MHDT	GAS	2882.254746	151421.3838	0.11060328	0.016317	0.001804714	3079.077043	473.4714463	23.28415321	23284.15321	6.50319479
San Diego	MHDT	DSL	22886.72851	1217628.279	0.88939672	0.016317	0.014512286	24759.85351	2970.233665	146.0687361	146068.7361	8.335995177
San Diego	OBUS	GAS	1591.258236	88804.35481	0.549635947	0.001926	0.001058599	1806.107706	272.6608204	13.40643648	13406.43648	6.624008919
San Diego	OBUS	DSL	928.9920903	72765.05354	0.450364053	0.001926	0.000867401	1479.899541	218.1253603	10.72498713	10724.98713	6.784628521
San Diego	SBUS	GAS	373.7747945	17615.65559	0.278862888	0.000753	0.000209984	358.259678	30.4848422	1.498942008	1498.942008	11.75205945
San Diego	SBUS	DSL	1197.474797	45553.93901	0.721137112	0.000753	0.000543016	926.4565509	127.614779	6.274828379	6274.828379	7.259790428
San Diego	UBUS	GAS	433.8573727	60679.95352	0.374283398	0.001932	0.000723116	1233.729417	244.0840137	12.00506886	12005.06886	5.054527736
San Diego	UBUS	DSL	725.3107192	101443.0629	0.625716602	0.001932	0.001208884	2062.514612	427.6698723	21.03458636	21034.58636	4.822679234

Project VMT (mi/yr)	1,706,130

Gasoline Sum	62,571
Diesel Sum	12,486

Operational Electricity Consumption

MHCF Electricity Consumption	977375	kWh/year
MHCF Water Consumption	9	Mgal/year
MHCF Electricity Required for Water Treatment and Delivery	19791	kWh/year
Total Operational Electricity Usage	**997166**	kWh/year

RJD 2020 Total Projected Water Usage	192	Mgal/year
RJD 2020 Total Projected Electricity Requirement for Water Treatment and Delivery	417	MWh/year
RJD Electricity to Water Conversion Factor	2	MWh/Mgal
	2172	kWh/Mgal

Sources: Electricity and Water Consuption from project-specific CalEEMod run, RJD specific data from CDCR CAP and CEC-500-2006-118 Table 9

Appendix C

Noise Modeling

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold	152	75.0
Onsite Receptor	70	81.7
Offsite Residence	5000	44.7

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Grader	85	0.4
Dozer	85	0.4
Backhoe	80	0.4

Ground Type	HARD
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Grader	81.0
Dozer	81.0
Backhoe	76.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
84.7

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold	129	75.0
Onsite Receptor	70	#VALUE!
Offsite Residence	5000	#VALUE!

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Crane	85	0.16
Forklift	75	0.5
Generator	82	0.5
Backhoe	80	0.4
Welder / Torch	73	0.4
Welder / Torch	73	0.4
Welder / Torch	73	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Crane	77.0
Forklift	72.0
Generator	79.0
Backhoe	76.0
Welder / Torch	69.0
Welder / Torch	69.0
Welder / Torch	69.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
83.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold	208	75.0
Onsite Receptor	70	84.4
Offsite Residence	5000	47.4

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Concrete Mixer Truck	85	0.4
Paver	85	0.4
Paver	85	0.4
Roller	85	0.4
Backhoe	80	0.4

Ground Type	HARD
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Concrete Mixer Truck	81.0
Paver	81.0
Paver	81.0
Roller	81.0
Backhoe	76.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
87.4

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold	56	75.0
Onsite Receptor	70	73.1
Offsite Residence	5000	36.0

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compressor (air)	80	0.4
		0.4
		0.4
		0.4
		0.4

Ground Type	HARD
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Compressor (air)	76.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
76.0

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Equipment Description	Acoustical Usage Factor (%)	Spec 721.560 Lmax @ 50ft (dBA slow)	Actual Measured Lmax @ 50ft (dBA slow)	No. of Actual Data Samples (count)	Spec 721.560 LmaxCalc	Spec 721.560 Leq	Distance	Actual Measured LmaxCalc	Actual Measured Leq
Auger Drill Rig	20	85	84	36	79.0	72.0	100	78.0	71.0
Backhoe	40	80	78	372	74.0	70.0	100	72.0	68.0
Bar Bender	20	80	na	0	74.0	67.0	100		
Blasting	na	94	na	0	88.0		100		
Boring Jack Power Unit	50	80	83	1	74.0	71.0	100	77.0	74.0
Chain Saw	20	85	84	46	79.0	72.0	100	78.0	71.0
Clam Shovel (dropping)	20	93	87	4	87.0	80.0	100	81.0	74.0
Compactor (ground)	20	80	83	57	74.0	67.0	100	77.0	70.0
Compressor (air)	40	80	78	18	74.0	70.0	100	72.0	68.0
Concrete Batch Plant	15	83	na	0	77.0	68.7	100		
Concrete Mixer Truck	40	85	79	40	79.0	75.0	100	73.0	69.0
Concrete Pump Truck	20	82	81	30	76.0	69.0	100	75.0	68.0
Concrete Saw	20	90	90	55	84.0	77.0	100	84.0	77.0
Crane	16	85	81	405	79.0	71.0	100	75.0	67.0
Dozer	40	85	82	55	79.0	75.0	100	76.0	72.0
Drill Rig Truck	20	84	79	22	78.0	71.0	100	73.0	66.0
Drum Mixer	50	80	80	1	74.0	71.0	100	74.0	71.0
Dump Truck	40	84	76	31	78.0	74.0	100	70.0	66.0
Excavator	40	85	81	170	79.0	75.0	100	75.0	71.0
Flat Bed Truck	40	84	74	4	78.0	74.0	100	68.0	64.0
Forklift	50	75			75.0				
Front End Loader	40	80	79	96	74.0	70.0	100	73.0	69.0
Generator	50	82	81	19	76.0	73.0	100	75.0	72.0
Generator (<25KVA, VMS si	50	70	73	74	64.0	61.0	100	67.0	64.0
Gradall	40	85	83	70	79.0	75.0	100	77.0	73.0
Grader	40	85	na	0	79.0	75.0	100		
Grapple (on Backhoe)	40	85	87	1	79.0	75.0	100	81.0	77.0
Horizontal Boring Hydr. Jac	25	80	82	6	74.0	68.0	100	76.0	70.0
Hydra Break Ram	10	90	na	0	84.0	74.0	100		
Impact Pile Driver	20	95	101	11	89.0	82.0	100	95.0	88.0
Jackhammer	20	85	89	133	79.0	72.0	100	83.0	76.0
Man Lift	20	85	75	23	79.0	72.0	100	69.0	62.0
Mounted Impact Hammer (	20	90	90	212	84.0	77.0	100	84.0	77.0
Pavement Scarafier	20	85	90	2	79.0	72.0	100	84.0	77.0
Paver	50	85	77	9	79.0	76.0	100	71.0	68.0
Pickup Truck	40	55	75	1	49.0	45.0	100	69.0	65.0
Pneumatic Tools	50	85	85	90	79.0	76.0	100	79.0	76.0
Pumps	50	77	81	17	71.0	68.0	100	75.0	72.0
Refrigerator Unit	100	82	73	3	76.0	76.0	100	67.0	67.0
Rivit Buster/chipping gun	20	85	79	19	79.0	72.0	100	73.0	66.0
Rock Drill	20	85	81	3	79.0	72.0	100	75.0	68.0
Roller	20	85	80	16	79.0	72.0	100	74.0	67.0
Sand Blasting (Single Nozzl	20	85	96	9	79.0	72.0	100	90.0	83.0
Scraper	40	85	84	12	79.0	75.0	100	78.0	74.0
Shears (on backhoe)	40	85	96	5	79.0	75.0	100	90.0	86.0
Slurry Plant	100	78	78	1	72.0	72.0	100	72.0	72.0
Slurry Trenching Machine	50	82	80	75	76.0	73.0	100	74.0	71.0
Soil Mix Drill Rig	50	80	na	0	74.0	71.0	100		
Tractor	40	84	na	0	78.0	74.0	100		
Vacuum Excavator (Vac-tru	40	85	85	149	79.0	75.0	100	79.0	75.0
Vacuum Street Sweeper	10	80	82	19	74.0	64.0	100	76.0	66.0
Ventilation Fan	100	85	79	13	79.0	79.0	100	73.0	73.0
Vibrating Hopper	50	85	87	1	79.0	76.0	100	81.0	78.0
Vibratory Concrete Mixer	20	80	80	1	74.0	67.0	100	74.0	67.0
Vibratory Pile Driver	20	95	101	44	89.0	82.0	100	95.0	88.0
Warning Horn	5	85	83	12	79.0	66.0	100	77.0	64.0
Welder / Torch	40	73	74	5	67.0	63.0	100	68.0	64.0

Source:
FHWA Roadway Construction Noise Model, January 2006. Table 9.1
U.S. Department of Transportation
CA/T Construction Spec. 721.560

Distance Propagation Calculations for Stationary Sources of Ground Vibration

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (VdB)	@	distance (ft)	vibration level (VdB)	@	distance (ft)
large bull dozer	87.0	@	25	18.0	@	5000
large bull dozer	87.0	@	25	73.6	@	70

STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (PPV)	@	distance (ft)	vibration level (PPV)	@	distance (ft)
large bull dozer	0.089	@	25	0.000	@	5000
large bull dozer	0.089	@	25	0.019	@	70

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 12-11 of FTA 2006. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Sources:

Federal Transit Association (FTA). 2006 (May). Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. Washington, D.C. Available: <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>. Accessed: September 24, 2010.

Parking Lot Noise Calculation

KEY:	Orange cells are for input.
	Green cells are data to present in a written analysis (output).

Number of automobiles per hour	95
Number of buses per hour	0
Distance to sensitive receptor (feet)	50

Leq @	50	**52.2**
Leq @	50	**52.2**

Source

Federal Transit Administration 2006 (May). Transit Noise and Vibration Impact Assessment. Chapter 5-General Noise Assessment, Table 5-6. Office of Planning and Environment.

Existing Noise Combined with Parking Lot Noise

Hourly Leq Noise Level by Noise Source	Existing Measured Noise Levels	Parking Lot Noise Levels	Combined Hourly Leq
Hour of Day			
0:00	52.4	0.0	52.4
1:00	50.6	0.0	50.6
2:00	49.2	0.0	49.2
3:00	46.5	0.0	46.5
4:00	48.5	0.0	48.5
5:00	56.2	52.2	57.6
6:00	63.6	52.2	63.9
7:00	64.0	52.2	64.3
8:00	63.8	52.2	64.1
9:00	63.0	52.2	63.3
10:00	63.1	52.2	63.4
11:00	63.3	52.2	63.6
12:00	63.2	52.2	63.5
13:00	63.4	52.2	63.7
14:00	63.9	52.2	64.2
15:00	64.2	52.2	64.5
16:00	64.0	52.2	64.3
17:00	64.4	52.2	64.7
18:00	62.9	52.2	63.3
19:00	61.7	52.2	62.2
20:00	58.9	52.2	59.7
21:00	58.1	0.0	58.1
22:00	56.7	0.0	56.7
23:00	55.8	0.0	55.8

Notes

Parking activity is assumed to occur during summer daylight hours only (i.e., 5 AM- 9 PM)

Existing Noise level values are shown in Appendix X, Long-term Noise Measurement Summary worksheet

Parking Lot CNEL Calculation

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Measurement Site: North Demo Northern Terminus near Tunnel Creek Road
Measurement Date: 8/23/2011
Project Name: North Demo

Computation of CNEL

Hour of Day (military time)	Sound Level Leq (dBA)	Sound Power =10*Log(dBA/10)	Period of 24-Hour Day (1=included, 0=not)			Sound Power Breakdown by Period of Day		
			Day	Evening	Night	Day	Evening	Night
0:00	52.4	173,781	0	0	1	0	0	173,781
1:00	50.6	114,816	0	0	1	0	0	114,816
2:00	49.2	83,177	0	0	1	0	0	83,177
3:00	46.5	44,669	0	0	1	0	0	44,669
4:00	48.5	70,796	0	0	1	0	0	70,796
5:00	57.6	581,569	0	0	1	0	0	581,569
6:00	63.9	2,455,568	0	0	1	0	0	2,455,568
7:00	64.3	2,676,586	1	0	0	2,676,586	0	0
8:00	64.1	2,563,533	1	0	0	2,563,533	0	0
9:00	63.3	2,159,962	1	0	0	2,159,962	0	0
10:00	63.4	2,206,438	1	0	0	2,206,438	0	0
11:00	63.6	2,302,662	1	0	0	2,302,662	0	0
12:00	63.5	2,253,996	1	0	0	2,253,996	0	0
13:00	63.7	2,352,462	1	0	0	2,352,462	0	0
14:00	64.2	2,619,409	1	0	0	2,619,409	0	0
15:00	64.5	2,794,968	1	0	0	2,794,968	0	0
16:00	64.3	2,676,586	1	0	0	2,676,586	0	0
17:00	64.7	2,918,929	1	0	0	2,918,929	0	0
18:00	63.3	2,114,545	1	0	0	2,114,545	0	0
19:00	62.2	1,643,808	0	1	0	0	1,643,808	0
20:00	59.7	940,947	0	1	0	0	940,947	0
21:00	58.1	645,655	0	1	0	0	645,655	0
22:00	56.7	467,736	0	0	1	0	0	467,736
23:00	55.8	380,190	0	0	1	0	0	380,190
Sum of Sound Power during Period wo/penalty						29,640,076	3,230,411	4,372,303
Log Factor for CNEL Penalty (i.e., 10*log(x))						1	3	10
Sound Power during Period with penalty						29,640,076	9,691,232	43,723,033

Total Daily Sound Power, with penalties	83,054,342
Hours per Day	24
Average Hourly Sound Power, with penalties	3,460,598
CNEL	65.4

Ldn computation on next page.

Computation of Ldn

Period of 24-Hour Day (1=included, 0=not)		Sound Power Breakdown by Period of Day	
Day	Night	Day	Night
0	1	0	173,781
0	1	0	114,816
0	1	0	83,177
0	1	0	44,669
0	1	0	70,796
0	1	0	581,569
0	1	0	2,455,568
1	0	2,676,586	0
1	0	2,563,533	0
1	0	2,159,962	0
1	0	2,206,438	0
1	0	2,302,662	0
1	0	2,253,996	0
1	0	2,352,462	0
1	0	2,619,409	0
1	0	2,794,968	0
1	0	2,676,586	0
1	0	2,918,929	0
1	0	2,114,545	0
1	0	1,643,808	0
1	0	940,947	0
1	0	645,655	0
0	1	0	467,736
0	1	0	380,190

Sum of Sound Power during Period wo/penalty	32,870,487	4,372,303
Log Factor for Penalty (i.e., 10*log(x))	1	10
Sound Power during Period with penalty	32,870,487	43,723,033

Total Daily Sound Power, with penalties	76,593,520
Hours per Day	24
Average Hourly Sound Power, with penalties	3,191,397
Ldn	65.0

Notes:

Computation of the CNEL based on 1-hour Leq measurements for each hour of a day are based on equation 2-27 on pg. 2-57 of Caltrans 2009.

Computation of the Ldn based on 1-hour Leq measurements for each hour of a day are based on equation 2-26 on pg. 2-56 of Caltrans 2009.

Log factors for the Ldn and CNEL penalties are provided in Table 2-12 on pg. 2-52 of Caltrans 2009.

Source:

California Deaprtment of Transportation (Caltrans), Divisiong of Environmental Analysis. 2009 (November). *2009 Technical Noise Supplement* . Sacramento, CA. Available: <http://www.dot.ca.gov/hq/env/noise/>. Accessed September 24, 2010.

Appendix D

Transportation Assessment

FEHR PEERS

MEMORANDUM

Date: October 24, 2018

To: Kelly Bray, Ascent Environmental, Inc.

From: Drew Heckathorn and Katy Cole

Subject: ***RJ Donovan Mental Health Facility - Existing Conditions Transportation Assessment***

SD17-0251

Fehr & Peers has completed a transportation assessment of existing conditions for the proposed redevelopment of the RJ Donovan State Prison Mental Health Facility (Project) in San Diego County. This memorandum includes our review of existing transportation facilities surrounding the project site and considers transportation impacts of the project.

PROJECT DESCRIPTION

The project site is located within the secure perimeter or the RJ Donovan Correctional Facility located on Donovan State Prison Road, west of Alta Road. The Project is proposed as a 45,000 square foot building, with approximately 50 beds and is a mental health treatment facility. Based on preliminary information from the applicant, the project would have approximately 167 employees (custody staff, support staff, mental health staff, medical/dental staff). Employees would be assigned to the following shifts: 6:00 am-2:00 pm, 8:00 am-5:00 pm, 2:00 pm-10:00 pm, 10:00 pm-6:00 am.

IMPACT CRITERIA & METHODOLOGY

This section describes the transportation evaluation methodology, including the type of analysis necessary to evaluate impacts and the identification of the study area.

COUNTY OF SAN DIEGO ANALYSIS TYPE DETERMINATION

This assessment determines whether the Project warrants a Traffic Impact Study per the County of San Diego requirements. Specifically, the County of San Diego requires detailed transportation impact analysis for most development projects. The *Guidelines for Determining Significance and Report Format and Content Requirements – Transportation and Traffic* (August 2011) provides guidelines and policies that guide transportation impact analysis. These guidelines indicate that they made every attempt to maintain consistency with national practices set forth by the Institute of Transportation Engineers (ITE) and local practices. The County Criteria for the Need to Prepare a Traffic Impact Study (TIS) table in this document provides guidance on the type of traffic impact study (TIS) necessary. Per the chart, if the proposed study meets one of the following criteria then a full TIS is warranted:

- Project generated traffic is at least 1,000 average daily trips, or 100 peak hour trips.

The Project is not expected to generate more than 1,000 total ADT or more than 100 AM or PM weekday peak-hour trips (as documented in the Project Transportation Conditions section of this report). Therefore, a full TIS is not required.

San Diego County does require issue specific or focused traffic impact studies for discretionary projects that generate more than 200 daily trips or more than 20 peak hour trips. Based on the trip generation for the project, if it were a discretionary project for San Diego County, a focused traffic impact study would be required. A focused TIS evaluates intersections near the project site, which have at least 25 peak hour trips added to them. The intersections selected for analysis generally meet this criteria.

PROJECT STUDY AREA

An existing and existing plus project transportation assessment was conducted to evaluate transportation conditions within the immediate vicinity of the project. Intersection peak hour level of service (LOS) analysis was conducted at the following two intersections:

- Enrico Fermi Drive/Otay Mesa Road
- Alta Road/Donovan State Prison Road

Additionally, the applicant identified concerns with vehicle speeds on Alta Road and issues (including vehicle queuing) turning to/from Alta Road onto Donovan State Prison Road. Therefore,

vehicle speed data on Alta Road was collected and reviewed and a traffic signal warrant analysis was also conducted at the Alta Road/Donovan State Prison Road intersection.

INTERSECTION ANALYSIS METHODOLOGY

Intersection LOS standards and thresholds provide the basis for analysis of intersection performance. The analysis of intersection LOS is based on roadway geometrics, the maximum roadway capacity, traffic volume including turning movements, and traffic signal timing. **Table 1** and **Table 2** present the intersection capacity and LOS standards used in the study's analysis for signalized and unsignalized intersections, respectively.

TABLE 1
SIGNALIZED INTERSECTION LOS DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

TABLE 2
UNSIGNALIZED INTERSECTION LOS DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delay.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Sources: *Highway Capacity Manual*, Transportation Research Board, 2010.

We also conducted a signal warrant analysis for the unsignalized Alta Road/Donovan State Prison Road intersection based on guidelines found in the California Manual of Uniform Traffic Control Devices (MUTCD) published by Caltrans. The following warrants were analyzed:

- **Warrant 2 – Four-hour vehicle volume:** The warrant evaluates vehicle volumes during the highest four one-hour periods (not necessarily consecutive) and compares those to minimum thresholds.
- **Warrant 3 – Peak hour:** The warrant evaluates vehicle volumes during the highest single one-hour timeframe (during the AM and PM peak periods) and compares those to minimum thresholds. This warrant should be applied where an adjacent land use generates a focused volume of traffic such as near an office or industrial facility or a school.

ACCEPTABLE LEVEL OF SERVICE

Typically, the performance and LOS measurements are heavily influenced by the ability of a roadway's intersections to accommodate peak hour traffic volumes. For the purpose of this traffic analysis, LOS D is considered acceptable for intersections in San Diego County.

To determine if a project contributes enough traffic to a transportation facility that is already operating at a poor LOS (LOS E or F) to consider mitigation measures in the County of San Diego, **Table 3** is used. If the project causes a change greater than the level shown, the project applicant is considered to be responsible for all or part of the improvements required to mitigate the site traffic to the level previously held on the facility prior to the project's traffic impacts (County of San Diego, 2011).

TABLE 3
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON INTERSECTIONS: ALLOWABLE INCREASES ON CONGESTED INTERSECTIONS

Level of Service	Signalized	Unsignalized
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
LOS F	Either a Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

Notes:

1. A critical movement is an intersection movement (right turn, left turn, through-movement) that experiences excessive queues, which typically operate at LOS F.
2. For determining significance at signalized intersections with LOS F conditions, the analysis must evaluate both the delay and the number of trips on a critical movement, exceedance of either criteria result in a significant impact.

Sources: *Guidelines for Determining Significance and Report Format and Content Requirements – Transportation and Traffic*, County of San Diego, 2011.

EXISTING CONDITIONS

ROADWAYS

The key roadways providing access to or near the site are described below. **Figure 1** illustrates the project site location, the surrounding roadway system and the study intersections. Descriptions of these facilities are presented below.

Donovan State Prison Road is a two-way, two-lane undivided roadway that connects with Alta Road to the east and Perimeter Road to the west. The entry of RJ Donovan Correctional Facility is 680 feet to the west of the intersection with Alta Road.

Alta Road connects with Otay Mesa Road to the south of the project area and ends further north of RJ Donovan at the entrance of East Mesa Juvenile Detention Facility. The street segment between Otay Mesa Road and Paseo De La Fuente is a two-way, two-lane roadway and transitions to a four-lane roadway with a continuous left-turn lane between Paseo De La Fuente and Donovan State Prison Road. The speed limit near Donovan State Prion Road is 55 mph.

Otay Mesa Road extends from Alta Road to Ocean View Hills Parkway. It is located to the south of the RJ Donovan Facility area. The street segment between Alta Road and Sanyo Ave is a two-way, two-lane roadway and the speed limit is 55 mph.

Enrico Fermi Drive is a two-way, two-lane roadway connecting with Otay Mesa Road to the north and Via De La Amistad to the south. The number of lanes increases to four at the northern approach to Airway Road.

Study Intersections

Figure 1

Study Area

PEDESTRIAN FACILITIES

Obstructed pedestrian facility at Enrico Fermi Drive and Otay Mesa Road

Pedestrian facilities generally consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. The sidewalks in the project area vary in quality and completeness with some obstructions at intersections. Since some of the parcels along Otay Mesa Road and Alta Road leading to RJ Donovan are not yet developed, the abutting roadways do not include sidewalks. Therefore, gaps exist in the sidewalk network.

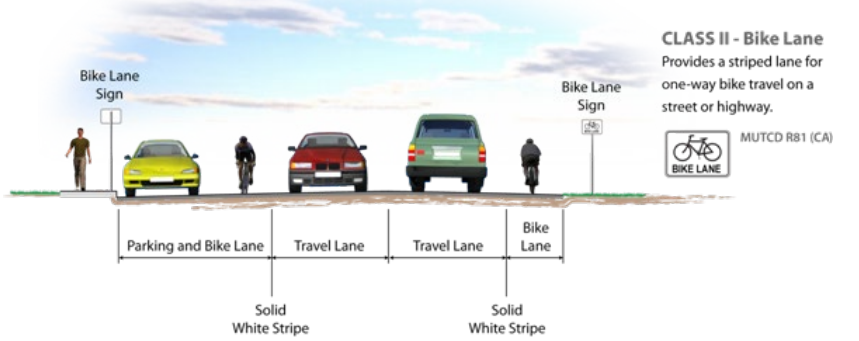
Due to the low-density and large distances between land uses, pedestrian activity in the study area is low. During our field visit in the morning peak period of June 27, 2018, only one pedestrian was observed. Other than RJ Donovan, most of the other land uses in the area are either automotive storage yards or freight distribution services. Neither of these land uses generally generates much, if any, pedestrian activity.

BICYCLE FACILITIES

Bicycle facilities generally consist of three types of facilities, which are outlined below:

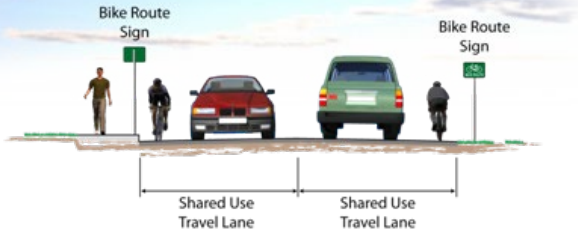
- *Bike or Shared Use Paths* provide a completely separate right-of-way and are designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized. Generally, the recommended pavement width for a two-directional shared use path is ten (10) feet.

- *Bike Lanes* provide a restricted right-of-way and are designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.



CLASS II - Bike Lane
Provides a striped lane for one-way bike travel on a street or highway.
MUTCD R81 (CA)

- *Bike Route or Signed Shared Roadways* provide for a right-of-way designated by signs or shared lane pavement markings, or "sharrows," for shared use with pedestrians or motor vehicles.



CLASS III - Bike Route
Provides a shared use with pedestrians or motor vehicle traffic, typically on lower volume roadways.
MUTCD D11-1

Similar to the pedestrian activity, the low-density and separation of land uses in the project area produces little bicycle activity. During our field visit in the morning peak period of June 27, 2018, only one bicyclist was observed.

While no bicycle facilities currently exist in the project area, San Diego County does propose bike lanes along Enrico Fermi Drive and Otay Mesa Road in its *Bicycle Transportation Plan*. The plan also proposes that new arterial and collector roadways in the overall Otay community include bike lanes in their design.

TRANSIT

No transit infrastructure is currently provided within easy walking distance of the project site. The closest bus stop is located over three miles away on Sanyo Avenue south of Otay Mesa Road.

FIELD OBSERVATIONS

Field observations of traffic operations were conducted on June 27, 2017 during the AM peak period commuting traffic, focusing on the Enrico Fermi Drive/Otay Mesa Road and the Alta Road/Donovan State Prison Road intersections.

Traffic generally flows smoothly through the Enrico Fermi Drive/Otay Mesa Road intersection. Short queues occasionally formed on the western approach of Otay Mesa Road and the southern approach of Enrico Fermi Drive, but these queues dissipated quickly and did not cause any congestion issues.

The right-turn movement from Enrico Fermi Drive onto Otay Mesa Road is restricted on red lights. This restriction is not common for most other intersections in the area, and a few drivers ignored the restriction.

No congestion-related issues were observed at the Alta Road/Donovan State Prison Road intersection. The vast majority of traffic during the AM peak period turned left from Alta Road onto Donovan State Prison Road heading toward RJ Donovan.

EXISTING TRAFFIC VOLUMES AND INTERSECTION LEVEL OF SERVICE

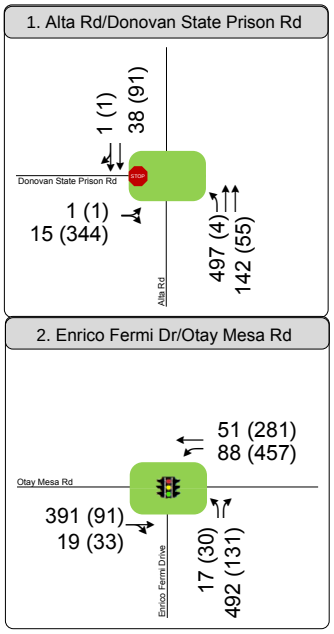
Traffic Volumes

Intersection turning movement counts were collected on May 16, 2018, during the AM (7:00 am to 9:00 am) and PM (4:00 pm to 6:00 pm) peak periods to determine existing peak hour commute traffic adjacent to the project site at the following locations:

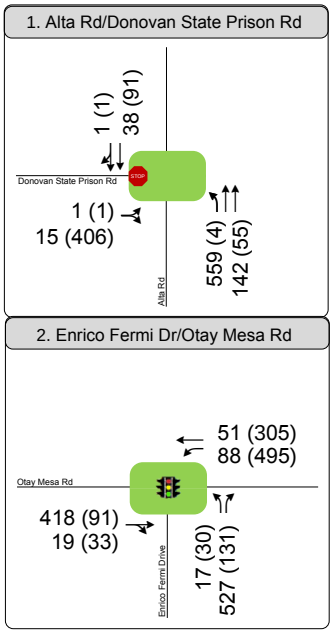
- Enrico Fermi Drive/Otay Mesa Road
- Alta Road/Donovan State Prison Road

Based on the intersection turning movement counts, the AM peak hour is between 7:00-8:00 am and the PM peak hour is between 4:00-5:00 pm. The peak hour traffic volumes are shown on **Figure 2**.

Existing



Existing Plus Project



AM / PM — A-C D E F — Level of Service (LOS) Grade

X — Study Intersection

Figure 2

Peak Hour Traffic Volumes and Lane Configurations - Existing and Existing Plus Project Conditions - AM (PM)

Additionally, daily volumes, vehicle classification, and vehicle speed were collected on Alta Road south of Donovan State Prison Road on Wednesday, May 16th and Thursday, May 17th. The following summarizes the data:

- Based on the daily traffic volume data, the average daily traffic on Alta Road is 5,290 vehicles.
- 85% of vehicles are passenger cars, 8% are single unit trucks (with four wheels, and two axels), 6% are larger trucks (with six or more wheels or 3 or more axels).
- The average travel speed is 40 miles per hour (mph) and the 85th percentile travel speed is 49 mph. The 85th percentile travel speed is commonly used by traffic engineers to set the speed limit of roadways.

The count data is provided in Attachment A.

Level of Service

The existing vehicle Level of Service (LOS) and delay were calculated at the study intersections using Highway Capacity Manual (HCM) 2010 methodology. The HCM methodology assigns an LOS grade to an intersection based on estimated delay at that intersection. For side-street-controlled intersections (such as Alta Road/Donovan State Prison Road), the delay is calculated for each stopped movement, not for the intersection as a whole. The intersection HCM analysis was conducted using Synchro software.

The existing traffic volumes, lane configuration, and traffic control devices (including signal timings where appropriate) were used to determine intersection operations at each location. Existing (2018) intersection LOS conditions are shown in **Table 3.** The technical calculation worksheets are provided in Attachment B.

TABLE 3
INTERSECTION LEVEL OF SERVICE (LOS) AND VEHICLE DELAY – EXISTING CONDITIONS

Study Intersections Adjacent to RJ Donovan	Intersection Control	Existing (2018)		
		Measurement	AM	PM
1. Enrico Fermi Drive/Otay Mesa Road	**Signalized**	**LOS**	C	B
		Delay	25.3	13.4
2. Alta Road/Donovan State Prison Road*	**Side-street stop**	**LOS**	B	B
		Delay	10.3	10.7

*Only the side-street approach to this intersection is analyzed per HCM methodology.
Sources: *Highway Capacity Manual*, Transportation Research Board, 2010.

Fehr & Peers did observe occasional queues forming at the eastbound approach to the Alta Road/Donovan State Prison Road intersection which appeared to cause longer delays than the 10.3-10.7 seconds noted in **Table 3**. If a large portion of the peak hour volume arrives at the intersection within a tight timeframe after a shift change (such as 15 minutes or less) queues may form at the eastbound approach. This queuing generally clears quickly and does not result in unacceptable intersection LOS.

TRANSPORTATION ANALYSIS

PROJECT TRIP GENERATION

The Project would construct a new mental health facility within the secure perimeter or the RJ Donovan Correctional Facility. The trips generated by the project would be associated with employees that work in the facility. The applicant provided preliminary data for the number of employees expected to work in the facility as 167 employees. Additionally, the project team provided shift schedule data for estimating when vehicle trips to/from the facility would occur. Employees would be assigned to the following shifts:

- 6:00 am-2:00 pm – Approximately 39 employees

- 8:00 am-5:00 pm – Approximately 69 employees
- 2:00 pm-10:00 pm – Approximately 37 employees
- 10:00 pm-6:00 am – Approximately 22 employees

Trip generation for the project was calculated using an assumed rate of two daily trips per employee (one trip to work and one trip out). This trip rate is consistent with employment uses where there are few off-site trips made (such as lunch trips) and recognizing that not all employees are present everyday. Note that the land use is unique; therefore is not included in either the 10th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual* or the SANDAG *(Not So) Brief Guide of Vehicular Trip Generations Rates for San Diego Region* (2002). **Table 4** shows the estimated trip generation for the project. Attachment C includes trip generation calculations.

TABLE 4
RJ DONOVAN MENTAL HEALTH FACILITY TRIP GENERATION

Land Use	Average Daily Rate	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Independent Variable = Employees (RJ Donovan Mental Health Facility = 167 Employees)				
RJ Donovan Mental Health Facility	2 per Employee	**334**	62	62

*AM/PM Peak Hour rates are determined based on staff shift transitions: For example, 69 employees work from 8:00 am-5:00 pm. Fehr & Peers assumes that 90% of these employees will arrive in the hour before their start time and 10% after. Therefore; 62 employees arrive between 7:00-8:00 and 7 employees arrive from 8:00-9:00. Likewise, the shift that ends at 5:00, will have 7 employees leave between 4:00-5:00 (which is the peak hour) and 62 employees leave between 5:00-6:00.

Sources: *Fehr & Peers, 2018*.

As shown in **Table 4**, the proposed project would generate 334 daily trips, 62 trips during the morning peak hour and 62 trips during the afternoon peak hour. The actual afternoon peak hour based on the traffic count data is between 4:00 -5:00 pm. Since the project employee's shift will end at 5:00, the majority of project trips (62 trips as shown in Table 4) will happen between 5:00 – 6:00 pm. However, to present a conservative, worst case scenario analysis, Fehr & Peers utilized the 62 project trips plus the existing traffic between 4:00 – 5:00 pm for the analysis. As described previously, the trip generation for the project is below the County of San Diego's minimum requirement to perform a full TIS.

EXISTING PLUS PROJECT LEVEL OF SERVICE ANALYSIS

Table 5 shows the existing plus project vehicle LOS at the study intersections. While the delay at each intersection increased slightly, the project traffic does not worsen the LOS at the study intesections. The technical calculation worksheets are provided in Attachment B.

TABLE 5
INTERSECTION LEVEL OF SERVICE (LOS) AND VEHICLE DELAY – EXISTING PLUS PROJECT CONDITIONS

Study Intersections Adjacent to RJ Donovan	Intersection Control	Existing (2018)		
		Measurement	AM	PM
1. Enrico Fermi Drive/Otay Mesa Road	Signalized	LOS	C	B
		Delay	31.8	13.7
2. Alta Road/Donovan State Prison Road*	Side-street stop	LOS	B	B
		Delay	10.9	11.3

*Only the side-street approach to this intersection is analyzed per HCM methodology.
Sources: *Highway Capacity Manual*, Transportation Research Board, 2010.

VEHICLE MILES OF TRAVEL (VMT)

The total daily vehicle miles of travel (VMT) for the project can be estimated using SANDAG's recently developed preliminary Senate Bill (SB) 743 Concept Map. This map helps jurisdictions and other interested parties estimate VMT per capita or VMT per employee for any census tract in the region in anticipation of changes to CEQA establishing VMT as the primary transportation criterion to assess significant impact, instead of LOS. Based on the SANDAG SB 743 Concept Map (provided in Attachment D), the VMT per employee for the area that includes the RJ Donovan Correctional Facility is 27.99 miles. Therefore, the project generates an estimated 4,674 vehicle-miles traveled per day (27.99*167 employees).

OTHER TRANSPORTATION CONSIDERATIONS

Signal Warrant Analysis

The Alta Road/Donovan State Prison Road intersection is currently side-street-controlled. **Table 6** presents a summary of the analysis of signal warrants at the Alta Road/Donovan State Prison Road intersection. This analysis is intended to examine the general correlation between the existing and

existing plus project traffic volumes and the need to install new traffic signals. The warrants presented are a sub-set of the standard traffic signal warrants recommended in California Manual on Uniform Traffic Control Devices (CA MUTCD). This analysis should not serve as the only basis for deciding whether and when to install a signal. San Diego County should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

As shown, the study intersection does not meet the CA MUTCD signal warrant criteria for the four hour volumes (Warrant 2) or the peak hour volumes (Warrant 3) under existing or existing plus project conditions. See Attachment E for a detailed analysis of the signal warrants. A traffic signal is typically warranted on a side-street-controlled intersection when the side-street (in this case Donovan State Prison Road) traffic suffers undue delay when entering or crossing the major street (in this case Alta Road).

TABLE 6
SIGNAL WARRANT EVALUATION UNDER EXISTING AND EXISTING PLUS PROJECT CONDITIONS

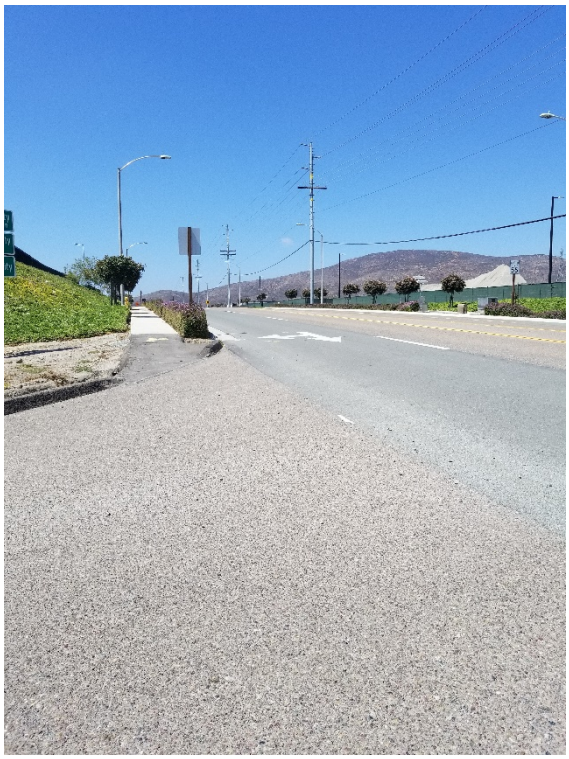
Study Intersection	MUTCD Warrant	Warrant Satisfied
Alta Road/Donovan State Prison Road	2. Four-Hour Volume	No
	3. Peak-Hour Volume	No

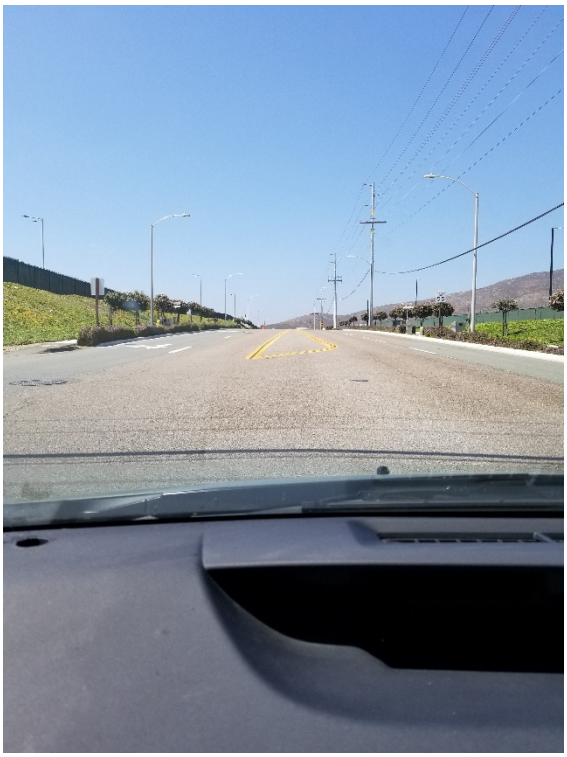
Sources: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014.

The worst case stop delay on Donovan State Prison Road is only about 11 seconds due to the overall low volume of opposing traffic on Alta Road. Traffic along Alta Road would need to be higher in order for the signal warrants to be met.

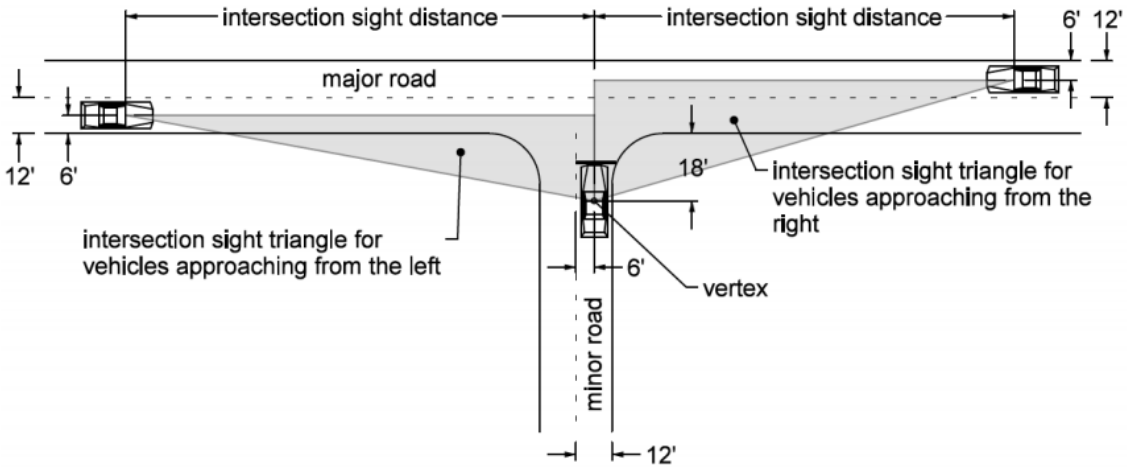
Sight Distance

During our field observations, we noted that the Alta Road/Donovan State Prison Road appeared to have sight distance limitations. Alta Road north of Donovan State Prison Road reaches the crest of a hill approximately 700 feet from the intersection. Additionally, the landscaped buffer on the west side of Alta Road includes a 2 foot tall hedge which restricts sight distances for drivers on the eastbound approach to the intersection (drivers turning from Donovan State Prison Road onto Alta Road). Our field measurements indicate that the hedge restricts sight distances to approximately 300 feet for drivers on Donovan State Prison Road. The three pictures below show the intersection sight distance from each approach direction.





The American Association of State Highway and Transportation Officials (AASHTO) sets guidelines for adequate intersection sight distance in their *AASHTO A Policy on Geometric Design of Highways and Streets* (AASHTO, 2011) document, also known as the Green Book. Designing intersections with adequate sight distance is important as it allows vehicles enough time to stop in case another vehicle does not successfully clear the intersection. Adequate sight distance also allows turning vehicles to assess when a safe time gap is available to complete their turn. The Green Book describes a sight distance triangle – an area that needs to be free of obstructions that restrict the view of vehicles approaching the intersection. The sight distance triangle is shown in the image below, with the shaded area indicating the triangles.



Adequate intersection sight distance depends on the speed of vehicles traveling on the main road, through the intersection. The Green Book provides a table showing the sight distance needed for a given vehicle speed. **Table 6** below reproduces this Green Book table.

TABLE 6
DESIGN INTERSECTION SIGHT DISTANCE

Design speed (mph)	Stopping sight distance (ft)	Intersection sight distance for passenger cars	
		Calculated (ft)	Design (ft)
15	80	165.4	170
20	115	220.5	225
25	155	275.6	280
30	200	330.8	335
35	250	385.9	390
40	305	441.0	445
45	360	496.1	500
50	425	551.3	555
55	495	606.4	610
60	570	661.5	665
65	645	716.6	720
70	730	771.8	775
75	820	826.9	830
80	910	882.0	885

Source: *AASHTO A Policy on Geometric Design of Highways and Streets*, AASHTO, 2011.

Since the speed limit on Alta Road is 55 mph, the intersection sight distance needs to be 610 feet for a vehicle on Donovan State Prison Road to turn right ahead of a vehicle traveling south on Alta Road. Due to the hedge within the landscaped buffer, the sight distance for cars turning right from Donovan State Prison Road onto Alta Road is only 300 feet. Fehr & Peers recommends eliminating this hedge for enough of its length in order for the intersection to comply with the AASHTO Green Book guidance. Based on preliminary estimates, approximately 250 feet of hedge along Alta Road (from Donovan State Prison Road north to the next driveway) should be removed. The schematic below (which is not to scale and for illustration only) shows the sight triangle at the eastbound approach.

Based on coordination with County staff, the appropriate process to remove the hedge is to obtain a permit from the County. The permit will allow the applicant to perform the work within the County's right-of-way to remove the hedge.

Another consideration is the speed limit of Alta Road. The current posted speed limit is 55 mph; however the 85th percentile speed is 49 mph. This indicates that the speed limit on Alta Road may be set too high. Traffic engineers commonly use the 85th percentile speed to set roadway speed limits. Reducing the speed limit to 50 mph would reduce the sight distance requirement from 610 feet to 555 feet. Coordination and discussion with the County of San Diego is necessary for speed limit modifications.

ATTACHMENT A: TRAFFIC COUNT AND SPEED DATA

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Alta Rd S/O Donovan State Prison Rd

Day: Wednesday
Date: 5/16/2018

City: San Diego
Project #: CA18_4179_001

DAILY TOTALS	NB	SB	EB	WB	Total
	2,526	2,695	0	0	5,221

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	2		3		0	0	5		12:00	26		33		0	0	59	
00:15	2		6		0	0	8		12:15	19		27		0	0	46	
00:30	2		2		0	0	4		12:30	27		25		0	0	52	
00:45	1	7	2	13	0	0	3	20	12:45	35	107	21	106	0	0	56	213
01:00	3		0		0	0	3		13:00	36		16		0	0	52	
01:15	3		4		0	0	7		13:15	58		26		0	0	84	
01:30	6		1		0	0	7		13:30	57		35		0	0	92	
01:45	4	16	4	9	0	0	8	25	13:45	42	193	59	136	0	0	101	329
02:00	1		2		0	0	3		14:00	15		122		0	0	137	
02:15	1		0		0	0	1		14:15	22		100		0	0	122	
02:30	0		1		0	0	1		14:30	16		110		0	0	126	
02:45	4	6	1	4	0	0	5	10	14:45	15	68	83	415	0	0	98	483
03:00	2		1		0	0	3		15:00	18		89		0	0	107	
03:15	14		2		0	0	16		15:15	16		76		0	0	92	
03:30	3		0		0	0	3		15:30	13		103		0	0	116	
03:45	16	35	1	4	0	0	17	39	15:45	16	63	116	384	0	0	132	447
04:00	1		4		0	0	5		16:00	13		171		0	0	184	
04:15	5		5		0	0	10		16:15	17		126		0	0	143	
04:30	6		6		0	0	12		16:30	11		65		0	0	76	
04:45	23	35	2	17	0	0	25	52	16:45	17	58	49	411	0	0	66	469
05:00	24		6		0	0	30		17:00	8		39		0	0	47	
05:15	79		7		0	0	86		17:15	20		53		0	0	73	
05:30	131		12		0	0	143		17:30	29		23		0	0	52	
05:45	138	372	24	49	0	0	162	421	17:45	12	69	32	147	0	0	44	216
06:00	37		37		0	0	74		18:00	10		32		0	0	42	
06:15	61		49		0	0	110		18:15	10		50		0	0	60	
06:30	81		31		0	0	112		18:30	6		23		0	0	29	
06:45	108	287	13	130	0	0	121	417	18:45	11	37	14	119	0	0	25	156
07:00	88		14		0	0	102		19:00	7		21		0	0	28	
07:15	136		12		0	0	148		19:15	3		22		0	0	25	
07:30	182		13		0	0	195		19:30	7		16		0	0	23	
07:45	171	577	10	49	0	0	181	626	19:45	4	21	11	70	0	0	15	91
08:00	92		16		0	0	108		20:00	3		20		0	0	23	
08:15	53		15		0	0	68		20:15	8		17		0	0	25	
08:30	34		24		0	0	58		20:30	4		21		0	0	25	
08:45	26	205	14	69	0	0	40	274	20:45	7	22	13	71	0	0	20	93
09:00	24		13		0	0	37		21:00	11		8		0	0	19	
09:15	27		19		0	0	46		21:15	23		10		0	0	33	
09:30	23		12		0	0	35		21:30	34		12		0	0	46	
09:45	21	95	11	55	0	0	32	150	21:45	13	81	44	74	0	0	57	155
10:00	12		15		0	0	27		22:00	4		99		0	0	103	
10:15	17		22		0	0	39		22:15	6		35		0	0	41	
10:30	14		21		0	0	35		22:30	1		23		0	0	24	
10:45	11	54	23	81	0	0	34	135	22:45	7	18	5	162	0	0	12	180
11:00	20		32		0	0	52		23:00	3		3		0	0	6	
11:15	16		17		0	0	33		23:15	2		4		0	0	6	
11:30	22		30		0	0	52		23:30	4		4		0	0	8	
11:45	29	87	26	105	0	0	55	192	23:45	4	13	4	15	0	0	8	28
TOTALS		1776		585				2361	TOTALS		750		2110				2860
SPLIT %		75.2%		24.8%				45.2%	SPLIT %		26.2%		73.8%				54.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,526	2,695	0	0	5,221

AM Peak Hour	07:15	05:45					07:15		PM Peak Hour	13:00	15:30					15:30		
AM Pk Volume	581	141					632		PM Pk Volume	193	516					575		
Pk Hr Factor	0.798	0.719					0.810		Pk Hr Factor	0.832	0.754					0.781		
7 - 9 Volume	782	118	0	0			900		4 - 6 Volume	127	558			0	0	685		
7 - 9 Peak Hour	07:15	08:00					07:15		4 - 6 Peak Hour	16:45	16:00					16:00		
7 - 9 Pk Volume	581	69	0	0			632		4 - 6 Pk Volume	74	411			0	0	469		
Pk Hr Factor	0.798	0.719	0.000	0.000			0.810		Pk Hr Factor	0.638	0.601			0.000	0.000	0.637		

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Alta Rd S/O Donovan State Prison Rd

Day: Thursday
Date: 5/17/2018

City: San Diego
Project #: CA18_4179_001

DAILY TOTALS	NB	SB	EB	WB	Total
	2,616	2,743	0	0	5,359

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		6		0	0	6		12:00	29		39		0	0	68	
00:15	2		4		0	0	6		12:15	20		29		0	0	49	
00:30	1		5		0	0	6		12:30	24		31		0	0	55	
00:45	0	3	0	15	0	0		18	12:45	50	123	19	118	0	0	69	241
01:00	2		1		0	0	3		13:00	29		27		0	0	56	
01:15	2		0		0	0	2		13:15	54		26		0	0	80	
01:30	5		3		0	0	8		13:30	63		55		0	0	118	
01:45	3	12	0	4	0	0	3	16	13:45	36	182	73	181	0	0	109	363
02:00	0		1		0	0	1		14:00	22		122		0	0	144	
02:15	3		1		0	0	4		14:15	10		109		0	0	119	
02:30	1		1		0	0	2		14:30	19		105		0	0	124	
02:45	3	7	0	3	0	0	3	10	14:45	15	66	75	411	0	0	90	477
03:00	2		0		0	0	2		15:00	12		74		0	0	86	
03:15	9		5		0	0	14		15:15	17		71		0	0	88	
03:30	7		1		0	0	8		15:30	16		93		0	0	109	
03:45	8	26	4	10	0	0	12	36	15:45	20	65	158	396	0	0	178	461
04:00	3		1		0	0	4		16:00	9		205		0	0	214	
04:15	8		4		0	0	12		16:15	10		63		0	0	73	
04:30	23		4		0	0	27		16:30	20		64		0	0	84	
04:45	21	55	2	11	0	0	23	66	16:45	21	60	54	386	0	0	75	446
05:00	38		7		0	0	45		17:00	9		63		0	0	72	
05:15	66		9		0	0	75		17:15	26		30		0	0	56	
05:30	143		12		0	0	155		17:30	22		28		0	0	50	
05:45	127	374	23	51	0	0	150	425	17:45	16	73	23	144	0	0	39	217
06:00	62		41		0	0	103		18:00	6		41		0	0	47	
06:15	61		30		0	0	91		18:15	6		30		0	0	36	
06:30	87		52		0	0	139		18:30	6		23		0	0	29	
06:45	91	301	18	141	0	0	109	442	18:45	10	28	23	117	0	0	33	145
07:00	119		19		0	0	138		19:00	4		11		0	0	15	
07:15	142		27		0	0	169		19:15	9		21		0	0	30	
07:30	178		18		0	0	196		19:30	2		13		0	0	15	
07:45	145	584	15	79	0	0	160	663	19:45	1	16	14	59	0	0	15	75
08:00	91		17		0	0	108		20:00	2		11		0	0	13	
08:15	48		12		0	0	60		20:15	6		13		0	0	19	
08:30	47		12		0	0	59		20:30	4		10		0	0	14	
08:45	36	222	20	61	0	0	56	283	20:45	6	18	9	43	0	0	15	61
09:00	35		20		0	0	55		21:00	10		11		0	0	21	
09:15	22		27		0	0	49		21:15	25		7		0	0	32	
09:30	22		21		0	0	43		21:30	30		13		0	0	43	
09:45	33	112	17	85	0	0	50	197	21:45	16	81	29	60	0	0	45	141
10:00	23		21		0	0	44		22:00	4		114		0	0	118	
10:15	24		17		0	0	41		22:15	5		18		0	0	23	
10:30	25		35		0	0	60		22:30	5		27		0	0	32	
10:45	18	90	19	92	0	0	37	182	22:45	3	17	9	168	0	0	12	185
11:00	23		21		0	0	44		23:00	1		4		0	0	5	
11:15	15		22		0	0	37		23:15	0		3		0	0	3	
11:30	24		29		0	0	53		23:30	2		2		0	0	4	
11:45	34	96	23	95	0	0	57	191	23:45	2	5	4	13	0	0	6	18
TOTALS		1882		647				2529	TOTALS		734		2096				2830
SPLIT %		74.4%		25.6%				47.2%	SPLIT %		25.9%		74.1%				52.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,616	2,743	0	0	5,359

AM Peak Hour	07:00	05:45					07:00		PM Peak Hour	12:45	15:15					15:15		
AM Pk Volume	584	146					663		PM Pk Volume	196	527					589		
Pk Hr Factor	0.820	0.702					0.846		Pk Hr Factor	0.778	0.643					0.688		
7 - 9 Volume	806	140	0	0			946		4 - 6 Volume	133	530	0	0			663		
7 - 9 Peak Hour	07:00	07:00					07:00		4 - 6 Peak Hour	16:45	16:00					16:00		
7 - 9 Pk Volume	584	79	0	0			663		4 - 6 Pk Volume	78	386	0	0			446		
Pk Hr Factor	0.820	0.731	0.000	0.000			0.846		Pk Hr Factor	0.750	0.471	0.000	0.000			0.521		

Prepared by National Data & Surveying Services

SPEED

Alta Rd S/O Donovan State Prison Rd

Day: Wednesday
Date: 5/16/2018

City: San Diego
Project #: CA18_4179_001n

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	0	0	2	1	3	0	0	0	0	7
01:00	0	0	1	1	0	3	5	3	2	0	1	0	0	16
02:00	0	0	0	0	0	1	2	3	0	0	0	0	0	6
03:00	0	0	0	0	2	12	9	6	6	0	0	0	0	35
04:00	0	1	3	4	2	5	6	9	3	2	0	0	0	35
05:00	0	0	2	4	12	51	115	113	54	17	4	0	0	372
06:00	0	0	1	2	12	46	105	82	26	12	1	0	0	287
07:00	1	0	0	8	38	151	217	116	38	7	1	0	0	577
08:00	1	1	2	4	14	26	81	45	29	1	0	1	0	205
09:00	1	0	3	5	16	18	25	9	13	2	3	0	0	95
10:00	2	0	3	5	5	9	15	6	6	2	1	0	0	54
11:00	0	1	3	3	7	22	20	16	11	4	0	0	0	87
12:00 PM	1	2	3	10	17	22	27	10	13	2	0	0	0	107
13:00	3	1	4	6	9	24	74	40	28	3	1	0	0	193
14:00	0	0	7	5	8	11	10	13	12	1	0	1	0	68
15:00	1	1	2	5	7	12	13	12	9	1	0	0	0	63
16:00	0	1	1	4	6	12	11	11	9	3	0	0	0	58
17:00	0	2	3	5	3	4	8	17	19	8	0	0	0	69
18:00	1	1	1	0	0	4	15	9	5	1	0	0	0	37
19:00	0	0	0	2	0	4	4	6	5	0	0	0	0	21
20:00	0	1	0	2	1	5	6	4	3	0	0	0	0	22
21:00	0	0	0	0	4	17	26	25	7	2	0	0	0	81
22:00	1	0	1	0	1	4	1	8	1	1	0	0	0	18
23:00	0	0	0	0	2	2	5	4	0	0	0	0	0	13
Totals	12	12	40	76	166	465	802	568	302	69	12	2		2526
% of Totals	0%	0%	2%	3%	7%	18%	32%	22%	12%	3%	0%	0%		100%

AM Volumes	5	3	18	37	108	344	602	409	191	47	11	1	0	1776
% AM	0%	0%	1%	1%	4%	14%	24%	16%	8%	2%	0%	0%		70%
AM Peak Hour	10:00	04:00	04:00	07:00	07:00	07:00	07:00	07:00	05:00	05:00	05:00	08:00		07:00
Volume	2	1	3	8	38	151	217	116	54	17	4	1		577
PM Volumes	7	9	22	39	58	121	200	159	111	22	1	1	0	750
% PM	0%	0%	1%	2%	2%	5%	8%	6%	4%	1%	0%	0%		30%
PM Peak Hour	13:00	12:00	14:00	12:00	12:00	13:00	13:00	13:00	13:00	17:00	13:00	14:00		13:00
Volume	3	2	7	10	17	24	74	40	28	8	1	1		193

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	782		31%	300		12%	127		5%	1317		52%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Alta Rd	North Bound	36	43	43	50	54	2526
Alta Rd	South Bound	31	38	37	44	48	2695

Prepared by National Data & Surveying Services

SPEED

Alta Rd S/O Donovan State Prison Rd

Day: Thursday
Date: 5/17/2018

City: San Diego
Project #: CA18_4179_001n

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	3
01:00	0	0	1	0	1	1	3	2	3	1	0	0	0	12
02:00	0	0	0	0	1	1	3	2	0	0	0	0	0	7
03:00	0	0	0	1	2	1	11	9	2	0	0	0	0	26
04:00	0	1	3	3	6	5	11	14	10	1	1	0	0	55
05:00	0	0	0	3	5	43	111	103	85	20	2	0	2	374
06:00	2	1	3	7	21	37	79	92	48	9	2	0	0	301
07:00	0	0	0	3	20	144	221	139	43	11	1	1	1	584
08:00	0	1	3	4	13	54	61	56	24	6	0	0	0	222
09:00	0	1	2	3	17	28	25	21	12	3	0	0	0	112
10:00	1	2	4	4	9	16	20	22	7	5	0	0	0	90
11:00	1	0	2	6	5	24	30	17	8	3	0	0	0	96
12:00 PM	0	2	1	4	12	20	34	25	23	1	1	0	0	123
13:00	1	1	2	7	9	28	55	48	25	6	0	0	0	182
14:00	0	0	8	7	2	12	6	13	14	3	0	1	0	66
15:00	0	2	5	3	5	13	16	11	10	0	0	0	0	65
16:00	0	1	0	0	5	7	15	18	10	2	1	1	0	60
17:00	2	1	1	0	0	3	9	20	34	3	0	0	0	73
18:00	0	0	0	1	2	3	9	10	3	0	0	0	0	28
19:00	0	0	0	0	4	1	3	4	3	1	0	0	0	16
20:00	0	0	1	0	3	1	4	4	4	0	0	1	0	18
21:00	0	0	0	2	3	7	39	24	5	1	0	0	0	81
22:00	0	0	0	0	1	4	2	5	5	0	0	0	0	17
23:00	0	0	0	0	1	1	1	1	1	0	0	0	0	5
Totals	7	13	36	58	147	454	769	662	379	76	8	4	3	2616
% of Totals	0%	0%	1%	2%	6%	17%	29%	25%	14%	3%	0%	0%	0%	100%

AM Volumes	4	6	18	34	100	354	576	479	242	59	6	1	3	1882
% AM	0%	0%	1%	1%	4%	14%	22%	18%	9%	2%	0%	0%	0%	72%
AM Peak Hour	06:00	10:00	10:00	06:00	06:00	07:00	07:00	07:00	05:00	05:00	05:00	07:00	05:00	07:00
Volume	2	2	4	7	21	144	221	139	85	20	2	1	2	584
PM Volumes	3	7	18	24	47	100	193	183	137	17	2	3	0	734
% PM	0%	0%	1%	1%	2%	4%	7%	7%	5%	1%	0%	0%		28%
PM Peak Hour	17:00	12:00	14:00	13:00	12:00	13:00	13:00	13:00	17:00	13:00	12:00	14:00		13:00
Volume	2	2	8	7	12	28	55	48	34	6	1	1		182

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	806		31%	305		12%	133		5%	1372		52%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Alta Rd	North Bound	36	44	44	51	54	2616
Alta Rd	South Bound	31	38	38	44	49	2743

Prepared by National Data & Surveying Services

CLASSIFICATION

Alta Rd S/O Donovan State Prison Rd

Day: Wednesday
Date: 5/16/2018

City: San Diego
Project #: CA18_4179_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	20	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	18	3	0	2	1	0	1	0	0	0	0	0	25
02:00	0	9	0	0	0	0	0	0	1	0	0	0	0	10
03:00	0	32	7	0	0	0	0	0	0	0	0	0	0	39
04:00	1	45	4	1	0	0	0	0	0	0	1	0	0	52
05:00	2	340	64	1	12	0	0	1	0	0	1	0	0	421
06:00	0	373	32	0	6	3	0	1	1	0	1	0	0	417
07:00	2	554	54	1	9	4	0	1	1	0	0	0	0	626
08:00	3	215	26	1	15	5	0	4	4	0	1	0	0	274
09:00	1	97	24	1	10	9	0	4	3	1	0	0	0	150
10:00	1	97	15	0	8	4	0	5	5	0	0	0	0	135
11:00	2	142	15	2	17	8	0	1	5	0	0	0	0	192
12:00 PM	2	153	17	1	14	9	0	6	10	0	1	0	0	213
13:00	3	250	27	0	30	9	0	6	4	0	0	0	0	329
14:00	3	426	28	4	12	3	0	2	3	0	2	0	0	483
15:00	0	402	18	1	14	2	0	3	4	1	2	0	0	447
16:00	4	435	17	0	6	1	0	1	5	0	0	0	0	469
17:00	2	191	13	1	3	3	0	1	2	0	0	0	0	216
18:00	0	141	9	2	4	0	0	0	0	0	0	0	0	156
19:00	0	76	11	0	2	1	0	1	0	0	0	0	0	91
20:00	0	82	9	0	1	0	0	0	1	0	0	0	0	93
21:00	0	139	13	0	1	1	0	0	1	0	0	0	0	155
22:00	0	171	5	1	2	0	0	0	1	0	0	0	0	180
23:00	0	23	5	0	0	0	0	0	0	0	0	0	0	28
Totals	26	4431	416	17	168	63		38	51	2	9			5221
% of Totals	0%	85%	8%	0%	3%	1%		1%	1%	0%	0%			100%

AM Volumes	12	1942	244	7	79	34	0	18	20	1	4	0	0	2361
% AM	0%	37%	5%	0%	2%	1%		0%	0%	0%	0%			45%
AM Peak Hour	08:00	07:00	05:00	11:00	11:00	09:00		10:00	10:00	09:00	04:00			07:00
Volume	3	554	64	2	17	9		5	5	1	1			626
PM Volumes	14	2489	172	10	89	29	0	20	31	1	5	0	0	2860
% PM	0%	48%	3%	0%	2%	1%		0%	1%	0%	0%			55%
PM Peak Hour	16:00	16:00	14:00	14:00	13:00	12:00		12:00	12:00	15:00	14:00			14:00
Volume	4	435	28	4	30	9		6	10	1	2			483

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	900		17%	542		10%	685		13%	3094		59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Alta Rd S/O Donovan State Prison Rd

Day: Thursday
Date: 5/17/2018

City: San Diego
Project #: CA18_4179_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	18	0	0	0	0	0	0	0	0	0	0	0	18
01:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
02:00	0	8	1	0	0	0	0	1	0	0	0	0	0	10
03:00	0	27	6	1	1	0	0	0	1	0	0	0	0	36
04:00	1	49	10	1	2	0	0	2	1	0	0	0	0	66
05:00	0	355	53	1	9	3	0	1	2	0	1	0	0	425
06:00	1	395	19	4	14	1	0	6	1	0	1	0	0	442
07:00	4	549	69	3	17	11	0	8	1	0	1	0	0	663
08:00	0	240	14	1	7	10	0	5	3	0	3	0	0	283
09:00	1	140	19	1	15	10	0	6	5	0	0	0	0	197
10:00	0	118	28	1	18	3	1	3	8	0	2	0	0	182
11:00	2	132	20	2	18	5	0	5	7	0	0	0	0	191
12:00 PM	0	191	14	2	14	7	0	9	4	0	0	0	0	241
13:00	0	310	29	1	9	8	0	0	6	0	0	0	0	363
14:00	1	420	19	2	21	4	0	6	4	0	0	0	0	477
15:00	1	434	10	1	11	2	0	1	0	0	1	0	0	461
16:00	0	416	20	0	2	0	1	2	5	0	0	0	0	446
17:00	1	195	12	1	5	0	0	0	3	0	0	0	0	217
18:00	0	129	9	1	4	0	0	0	1	0	1	0	0	145
19:00	1	66	6	0	0	0	0	1	1	0	0	0	0	75
20:00	0	49	6	0	4	2	0	0	0	0	0	0	0	61
21:00	0	117	16	0	4	3	0	0	1	0	0	0	0	141
22:00	1	177	4	0	2	0	0	1	0	0	0	0	0	185
23:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
Totals	14	4568	385	23	177	69	2	57	54		10			5359
% of Totals	0%	85%	7%	0%	3%	1%	0%	1%	1%		0%			100%

AM Volumes	9	2046	240	15	101	43	1	37	29	0	8	0	0	2529
% AM	0%	38%	4%	0%	2%	1%	0%	1%	1%		0%			47%
AM Peak Hour	07:00	07:00	07:00	06:00	10:00	07:00	10:00	07:00	10:00		08:00			07:00
Volume	4	549	69	4	18	11	1	8	8		3			663
PM Volumes	5	2522	145	8	76	26	1	20	25	0	2	0	0	2830
% PM	0%	47%	3%	0%	1%	0%	0%	0%	0%		0%			53%
PM Peak Hour	14:00	15:00	13:00	12:00	14:00	13:00	16:00	12:00	13:00		15:00			14:00
Volume	1	434	29	2	21	8	1	9	6		1			477

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	946		18%	604		11%	663		12%	3146		59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
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4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

Alta Rd & Donovan State Prison Rd

Peak Hour Turning Movement Count

ID: 18-04178-001
City: San Diego

Day: Wednesday
Date: 05/16/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Alta Rd — SOUTHBOUND

AM	1	38	0	0	143	AM
NOON	0	0	0	0	0	NOON
PM	1	91	0	0	56	PM
	0.5	1.5	0	0		

Donovan State Prison Rd — EASTBOUND

AM	NOON	PM	
498	0	5	
0	0	0	0
1	0	1	0
0	0	0	1
15	0	344	0
AM	NOON	PM	

Donovan State Prison Rd — WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

Alta Rd — NORTHBOUND

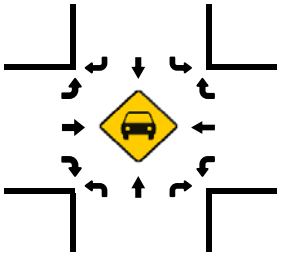
PM	435	0	4	55	0	PM
NOON	0	0	0	0	0	NOON
AM	53	0	497	142	0	AM
		0	1	2	0	

CONTROL

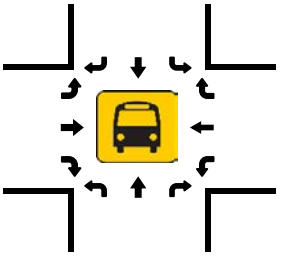
1-Way Stop(EB)

TEV	694 AM	0 NOON	496 PM
PHF	0.84		0.67

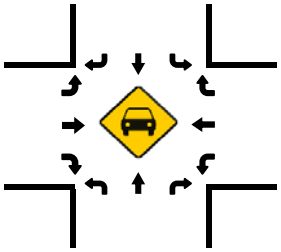
Total Vehicles (AM)



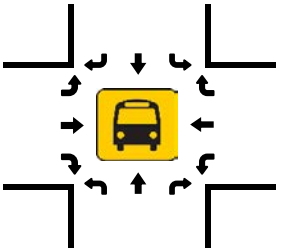
Total Vehicles (AM)



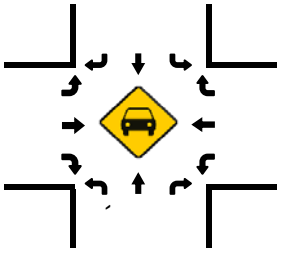
Total Vehicles (NOON)



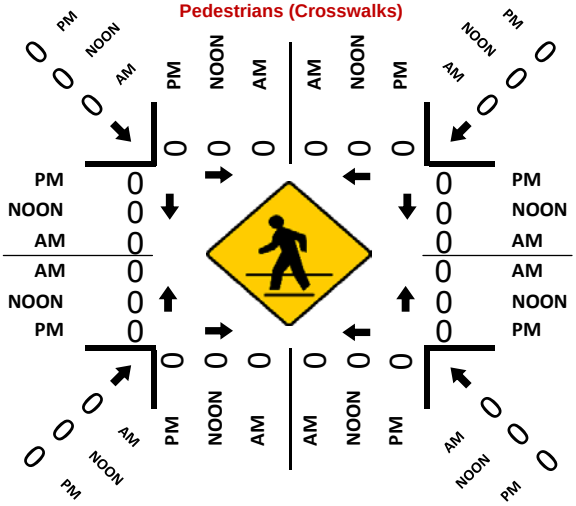
Total Vehicles (NOON)



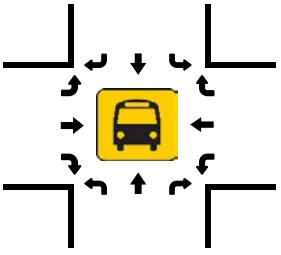
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

Enrico Fermi Dr & Otay Mesa Rd

Peak Hour Turning Movement Count

ID: 18-04178-002
City: San Diego

Day: Wednesday
Date: 05/16/2018

PEAK HOURS

AM: 07:00 AM - 08:00 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Enrico Fermi Dr

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

0 0 0 0

EASTBOUND

Otay Mesa Rd

AM	NOON	PM	
68	0	311	⇦
0	0	0	↶ 0
0	0	0	↱ 0
391	0	91	→ 1
19	0	33	↴ 0

AM NOON PM

CONTROL

Signalized

TEV	### AM	0 NOON	### PM
PHF	0.84		0.84

WESTBOUND

Otay Mesa Rd

PM	NOON	AM	
0	0	0	↰ 0
281	0	51	← 1
457	0	88	↰ 1
0	0	0	↰ 0
222	0	883	⇨

PM NOON AM

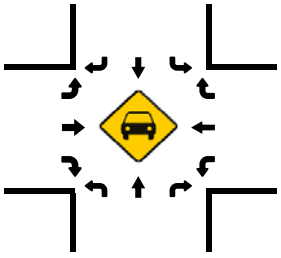
0 1 0 1

NORTHBOUND

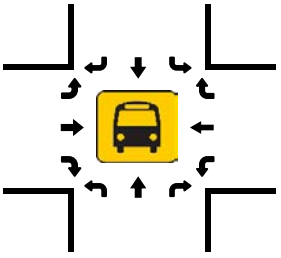
PM	490	0	30	0	131	PM
NOON	0	0	0	0	0	NOON
AM	107	0	17	0	492	AM

Enrico Fermi Dr

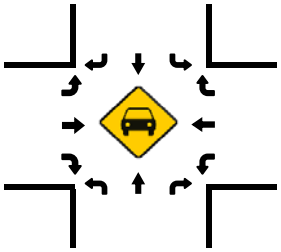
Total Vehicles (AM)



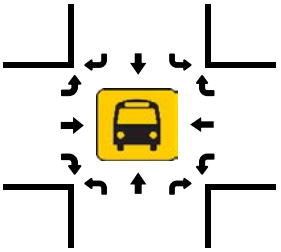
Total Vehicles (AM)



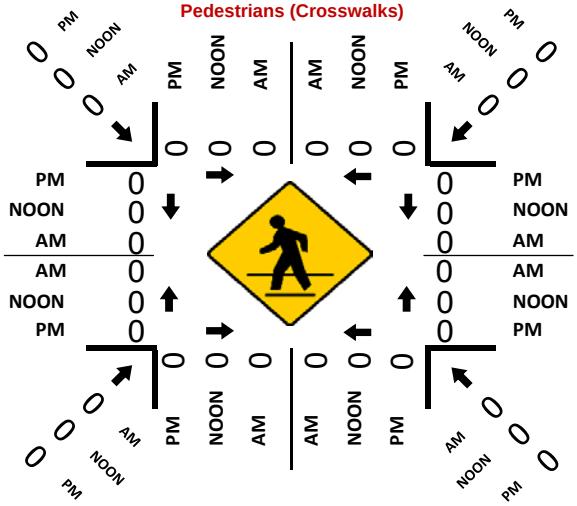
Total Vehicles (NOON)



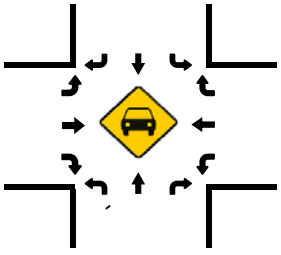
Total Vehicles (NOON)



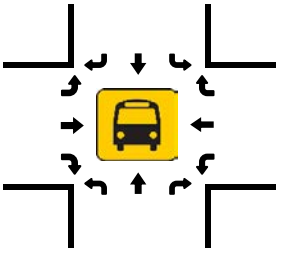
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



ATTACHMENT B: LEVEL OF SERVICE ANALYSIS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	391	19	88	51	17	492
Future Volume (veh/h)	391	19	88	51	17	492
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	425	21	96	55	18	535
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	498	25	125	805	658	587
Arrive On Green	0.28	0.28	0.07	0.43	0.37	0.37
Sat Flow, veh/h	1760	87	1774	1863	1774	1583
Grp Volume(v), veh/h	0	446	96	55	18	535
Grp Sat Flow(s),veh/h/ln	0	1847	1774	1863	1774	1583
Q Serve(g_s), s	0.0	13.9	3.2	1.1	0.4	19.6
Cycle Q Clear(g_c), s	0.0	13.9	3.2	1.1	0.4	19.6
Prop In Lane		0.05	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	523	125	805	658	587
V/C Ratio(X)	0.00	0.85	0.77	0.07	0.03	0.91
Avail Cap(c_a), veh/h	0	606	873	1223	1165	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.6	27.8	10.1	12.2	18.2
Incr Delay (d2), s/veh	0.0	10.5	3.7	0.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.6	1.7	0.5	0.2	9.0
LnGrp Delay(d),s/veh	0.0	31.2	31.5	10.2	12.2	21.4
LnGrp LOS		C	C	B	B	C
Approach Vol, veh/h	446			151	553	
Approach Delay, s/veh	31.2			23.7	21.1	
Approach LOS	C			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.1	23.2				32.3		28.6
Change Period (Y+Rc), s	4.8	6.0				6.0		6.0
Max Green Setting (Gmax), s	30.0	20.0				40.0		40.0
Max Q Clear Time (g_c+I1), s	5.2	15.9				3.1		21.6
Green Ext Time (p_c), s	0.1	1.3				4.3		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	497	142	38	1
Future Vol, veh/h	1	15	497	142	38	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	170	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	16	540	154	41	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1200	21	42	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	1158	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	178	1051	1565	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	117	1051	1565	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	171	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	6.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1565	-	701	-	-
HCM Lane V/C Ratio	0.345	-	0.025	-	-
HCM Control Delay (s)	8.5	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	1.6	-	0.1	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	91	33	457	281	30	131
Future Volume (veh/h)	91	33	457	281	30	131
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	99	36	497	305	33	142
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	227	83	575	1130	216	193
Arrive On Green	0.17	0.17	0.32	0.61	0.12	0.12
Sat Flow, veh/h	1305	474	1774	1863	1774	1583
Grp Volume(v), veh/h	0	135	497	305	33	142
Grp Sat Flow(s),veh/h/ln	0	1779	1774	1863	1774	1583
Q Serve(g_s), s	0.0	3.0	11.6	3.4	0.7	3.8
Cycle Q Clear(g_c), s	0.0	3.0	11.6	3.4	0.7	3.8
Prop In Lane		0.27	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	310	575	1130	216	193
V/C Ratio(X)	0.00	0.44	0.86	0.27	0.15	0.74
Avail Cap(c_a), veh/h	0	804	1203	1684	1604	1432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.3	14.0	4.1	17.4	18.7
Incr Delay (d2), s/veh	0.0	1.2	1.6	0.2	0.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	5.9	1.7	0.4	1.8
LnGrp Delay(d),s/veh	0.0	17.5	15.6	4.2	17.5	20.8
LnGrp LOS		B	B	A	B	C
Approach Vol, veh/h	135			802	175	
Approach Delay, s/veh	17.5			11.3	20.2	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.1	13.7				32.8		11.4
Change Period (Y+Rc), s	4.8	6.0				6.0		6.0
Max Green Setting (Gmax), s	30.0	20.0				40.0		40.0
Max Q Clear Time (g_c+I1), s	13.6	5.0				5.4		5.8
Green Ext Time (p_c), s	0.7	2.7				3.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	344	4	55	91	1
Future Vol, veh/h	1	344	4	55	91	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	170	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	374	4	60	99	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	138	50	100	0	-	0
Stage 1	99	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	841	1008	1490	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	839	1008	1490	-	-	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1490	-	1007	-	-
HCM Lane V/C Ratio	0.003	-	0.372	-	-
HCM Control Delay (s)	7.4	-	10.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	1.7	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	418	19	88	51	17	527
Future Volume (veh/h)	418	19	88	51	17	527
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	454	21	96	55	18	573
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	505	23	125	798	694	620
Arrive On Green	0.29	0.29	0.07	0.43	0.39	0.39
Sat Flow, veh/h	1767	82	1774	1863	1774	1583
Grp Volume(v), veh/h	0	475	96	55	18	573
Grp Sat Flow(s),veh/h/ln	0	1848	1774	1863	1774	1583
Q Serve(g_s), s	0.0	16.5	3.5	1.2	0.4	23.0
Cycle Q Clear(g_c), s	0.0	16.5	3.5	1.2	0.4	23.0
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	529	125	798	694	620
V/C Ratio(X)	0.00	0.90	0.77	0.07	0.03	0.92
Avail Cap(c_a), veh/h	0	555	799	1118	1065	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.9	30.4	11.2	12.5	19.3
Incr Delay (d2), s/veh	0.0	17.3	3.7	0.0	0.0	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.8	1.9	0.6	0.2	11.3
LnGrp Delay(d),s/veh	0.0	40.1	34.1	11.3	12.5	27.1
LnGrp LOS		D	C	B	B	C
Approach Vol, veh/h	475			151	591	
Approach Delay, s/veh	40.1			25.8	26.7	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.5	25.1				34.6		32.1
Change Period (Y+Rc), s	4.8	6.0				6.0		6.0
Max Green Setting (Gmax), s	30.0	20.0				40.0		40.0
Max Q Clear Time (g_c+I1), s	5.5	18.5				3.2		25.0
Green Ext Time (p_c), s	0.1	0.6				4.6		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	559	142	38	1
Future Vol, veh/h	1	15	559	142	38	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	170	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	16	608	154	41	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1334	21	42	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	1292	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	145	1051	1565	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	89	1051	1565	-	-	-
Mov Cap-2 Maneuver	89	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	135	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1565	-	627	-	-
HCM Lane V/C Ratio	0.388	-	0.028	-	-
HCM Control Delay (s)	8.8	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	1.9	-	0.1	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	91	33	495	305	30	131
Future Volume (veh/h)	91	33	495	305	30	131
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	99	36	538	332	33	142
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	226	82	612	1156	215	192
Arrive On Green	0.17	0.17	0.34	0.62	0.12	0.12
Sat Flow, veh/h	1305	474	1774	1863	1774	1583
Grp Volume(v), veh/h	0	135	538	332	33	142
Grp Sat Flow(s),veh/h/ln	0	1779	1774	1863	1774	1583
Q Serve(g_s), s	0.0	3.2	13.3	3.8	0.8	4.0
Cycle Q Clear(g_c), s	0.0	3.2	13.3	3.8	0.8	4.0
Prop In Lane		0.27	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	308	612	1156	215	192
V/C Ratio(X)	0.00	0.44	0.88	0.29	0.15	0.74
Avail Cap(c_a), veh/h	0	764	1143	1600	1524	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.2	14.3	4.1	18.3	19.7
Incr Delay (d2), s/veh	0.0	1.2	1.7	0.2	0.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	6.7	2.0	0.4	1.8
LnGrp Delay(d),s/veh	0.0	18.4	16.0	4.2	18.4	21.8
LnGrp LOS		B	B	A	B	C
Approach Vol, veh/h	135			870	175	
Approach Delay, s/veh	18.4			11.5	21.2	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	20.9	14.1				34.9		11.7
Change Period (Y+Rc), s	4.8	6.0				6.0		6.0
Max Green Setting (Gmax), s	30.0	20.0				40.0		40.0
Max Q Clear Time (g_c+I1), s	15.3	5.2				5.8		6.0
Green Ext Time (p_c), s	0.8	2.9				3.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	406	4	55	91	1
Future Vol, veh/h	1	406	4	55	91	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	170	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	441	4	60	99	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	138	50	100	0	-	0
Stage 1	99	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	841	1008	1490	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	839	1008	1490	-	-	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1490	-	1008	-	-
HCM Lane V/C Ratio	0.003	-	0.439	-	-
HCM Control Delay (s)	7.4	-	11.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	2.3	-	-

ATTACHMENT C: TRIP GENERATION

RJ Donovan Trip Generation

5-Jul-18 by K.Cole

Employees By Shift

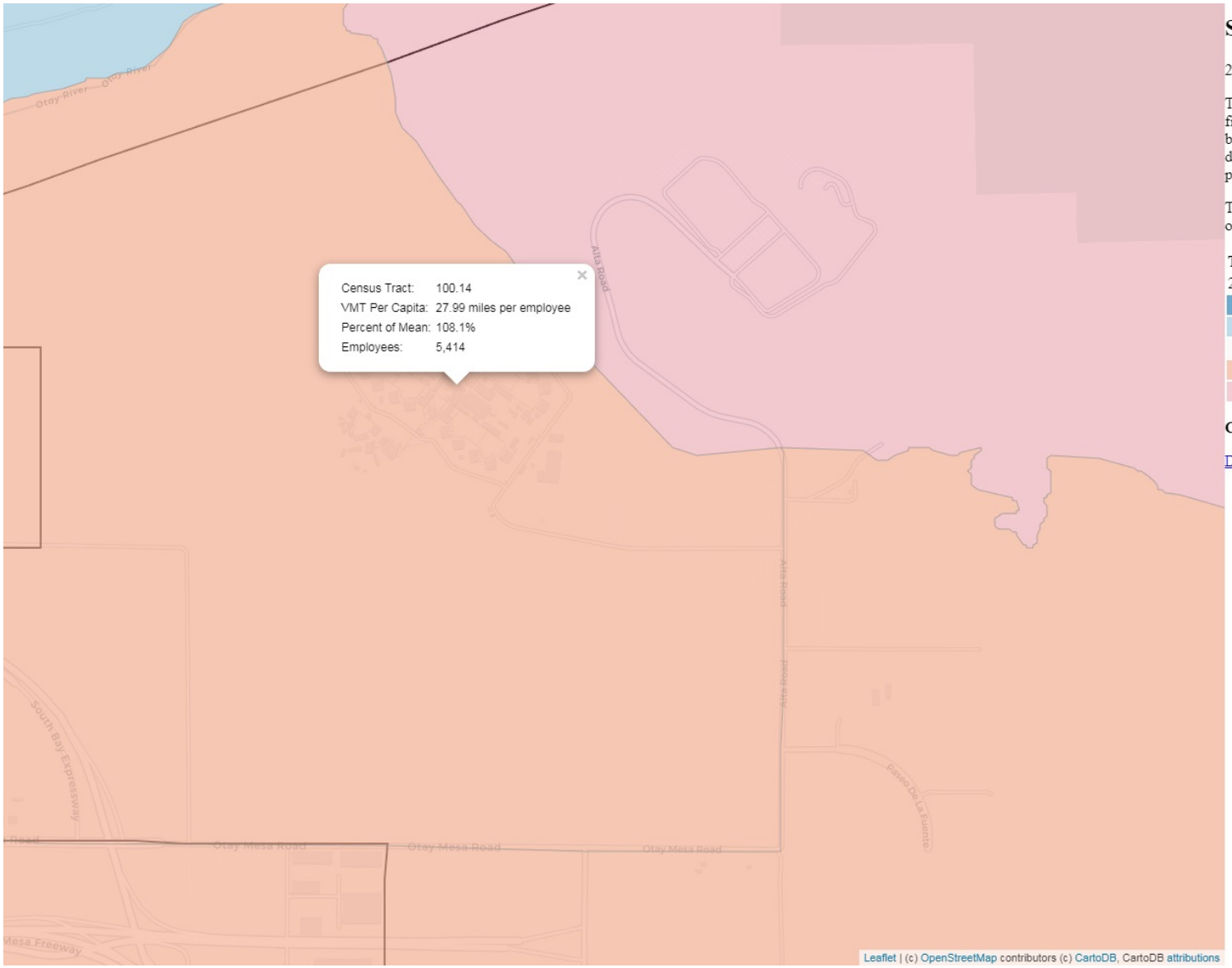
6am-2pm	2pm-10pm	10pm-6am	8am-5pm	Total
39	37	22	69	167

Trip Generation

Time Period (hour starting	Employees Arriving	Employees Departing	Hourly Totals
12:00am			0
1:00am			0
2:00am			0
3:00am			0
4:00am			0
5:00am	35	2	37
6:00am	4	20	24
7:00am	**62**		**62**
8:00am	7		7
9:00am			0
10:00am			0
11:00am			0
12:00pm			0
1:00pm	34	4	38
2:00pm	3	35	38
3:00pm			0
4:00pm		7	7
5:00pm		**62**	**62**
6:00pm			0
7:00pm			0
8:00pm			0
9:00pm	20	3	23
10:00pm	2	34	36
11:00pm			0
Total	167	167	334

Assumptions: 90% arrive during hour before start time; 10% arrive in hour after start time. 10% leave in hour before end time; 90% leve in hour after end time.

ATTACHMENT D: SANDAG SB 743 CONCEPT MAP



SB 743 Concept Map for the SANDAG Region

2012 Run Base on SANDAG ABM Scenario 720

The California Office of Planning and Research (OPR) is still working to finalize SB 743 CEQA Guidelines. The presentation of this information is based on an interpretation of the draft guidelines from 2015. SANDAG does not recommend using this information for CEQA analysis at this point in time.

This map is a per capita VMT of employees. VMT is assigned to the tract of the employment location.

Tract VMT Per Capita of Employees Relative to Regional Mean

2012 Regional Mean = 25.90 VMT per San Diego resident employee

- Less than 50 Percent of Regional Mean
- 50 to 85 Percent of Regional Mean
- 85 to 100 Percent of Regional Mean
- 100 to 125 Percent of Regional Mean
- More than 125 Percent of Regional Mean

Click on zones for more detailed information.

Download Data as Shapefile

ATTACHMENT E: SIGNAL WARRANT ANALYSIS

Warrant 2: Four-Hour Vehicular Volumes **- Existing Conditions**

The Four Hour Volume Warrant is satisfied when each of any four hours of an average day the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the curve in Figure 4-7 for the existing combination of approach lanes.

When the 85-percentile speed of the major-street exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the four hour volume requirement is satisfied when the plotted points referred to fall above the curve in Figure 4-8 for the existing combination of approach lanes.

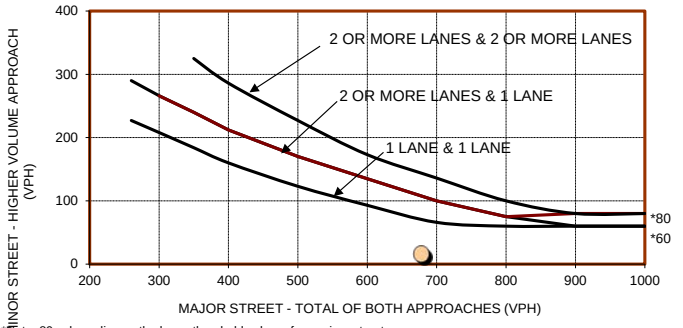
Analysis

	No of lanes
Major Street	2
Minor Street	1

Peak Four Hours

	Vehicles Per Hour	
Time	Major Street (Sum of both approaches)	Minor street (High volume approach)
7:00 AM	678	16
2:00 PM	156	329
3:00 PM	145	304
4:00 PM	151	345

FIGURE 4C-2. FOUR HOUR VOLUME WARRANT
(Community less than 10,000 or above 40 mph on major street)



*Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one or lane.

Warrant **Not Met**

	Minor Street			
Major St	1 maj 1 min	2 maj 1 min	1 maj 2 min	2 maj 2 min
260	227		290	
300	208	266	266	
350	184	240	240	325
400	160	212	212	286
500	123	170	170	227
600	93	135	135	173
700	66	100	100	136
800	60	75	75	100
900	60	80	60	80
1000	60	80	60	80

Warrant 2: Four-Hour Vehicular Volumes **- Existing Plus Project**

The Four Hour Volume Warrant is satisfied when each of any four hours of an average day the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the curve in Figure 4-7 for the existing combination of approach lanes.

When the 85-percentile speed of the major-street exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the four hour volume requirement is satisfied when the plotted points referred to fall above the curve in Figure 4-8 for the existing combination of approach lanes.

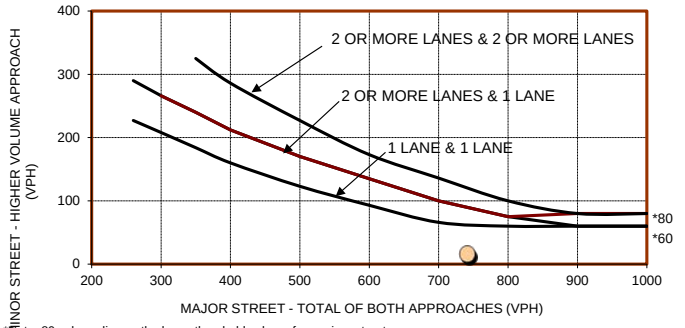
Analysis

	No of lanes
Major Street	2
Minor Street	1

Peak Four Hours

	Vehicles Per Hour	
Time	Major Street (Sum of both approaches)	Minor street (High volume approach)
7:00 AM	740	16
2:00 PM	159	364
3:00 PM	145	304
4:00 PM	151	407

FIGURE 4C-2. FOUR HOUR VOLUME WARRANT
(Community less than 10,000 or above 40 mph on major street)



*Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one or lane.

Warrant **Not Met**

	Minor Street			
Major St	1 maj 1 min	2 maj 1 min	1 maj 2 min	2 maj 2 min
260	227		290	
300	208	266	266	
350	184	240	240	325
400	160	212	212	286
500	123	170	170	227
600	93	135	135	173
700	66	100	100	136
800	60	75	75	100
900	60	80	60	80
1000	60	80	60	80

FEHR PEERS

Major Street	Alta Road	Project	RJ Donovan Transportation Assessment
Minor Street	Donovan State Prison Road	Scenario	Existing
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	497	0	1	0
Through	142	38	0	0
Right	0	1	15	0
Total	639	39	16	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	10.3
Approach with Worst Case Delay	NB
Total Vehicles on Approach	639

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing	**1.8**	**16**	**694**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

California MUTCD 2014 Edition
(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)
Chapter 4C – Traffic Control Signal Needs Studies
Part 4 – Highway Traffic Signals
Pages 830-1

Section 4C.04 Warrant 3, Peak Hour

Support:

01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

02 This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

03 The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Option:

04 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to evaluate the criteria in the second category of the Standard.

05 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Guidance:

06 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal should be traffic-actuated.

FEHR PEERS

Major Street	Alta Road	Project	RJ Donovan Transportation Assessment
Minor Street	Donovan State Prison Road	Scenario	Existing
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	0	1	0
Through	55	91	0	0
Right	0	1	344	0
Total	59	92	345	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	10.7
Approach with Worst Case Delay	NB
Total Vehicles on Approach	59

Warrant 3A, Peak Hour

	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Serviced (vph)
Existing	**0.2**	**345**	**496**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Not Met**
Warrant Met	**NO**		

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Chapter 4C – Traffic Control Signal Needs Studies
Part 4 – Highway Traffic Signals
Pages 830-1

Section 4C.04 Warrant 3, Peak Hour

Support:

01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

02 This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

03 The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Option:

04 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to evaluate the criteria in the second category of the Standard.

05 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Guidance:

06 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal should be traffic-actuated.

Warrant 3B: Peak Hour Volume **- Existing Conditions - AM Peak Hour**

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

When the 85-percentile speed of the major street traffic exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the peak hour volume requirement is satisfied when the plotted point referred to above falls above the curve in Figure 4-6 for the existing combination of approach lanes.

Analysis

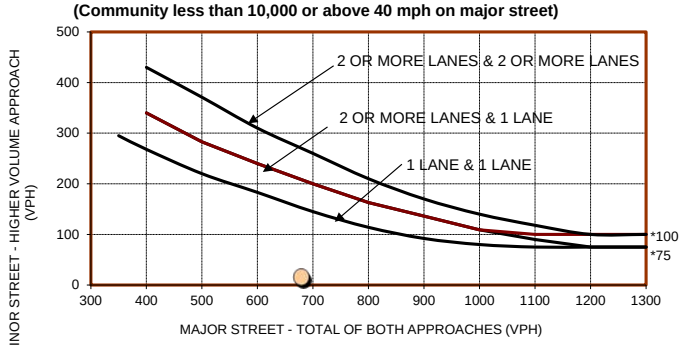
	No of lanes
Major Street	2
Minor Street	1

Peak Hour

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
7:15 AM	678	16

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
350	295			
400	268	340	340	430
500	220	283	283	371
600	183	240	240	310
700	145	200	200	260
800	114	163	163	210
900	92	136	136	170
1000	80	109	109	140
1100	75	100	90	118
1200	75	100	75	100
1300	75	100	75	100

FIGURE 4C-4. PEAK HOUR VOLUME WARRANT
(Community less than 10,000 or above 40 mph on major street)



*Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one or lane.

Warrant	Not Met

Warrant 3B: Peak Hour Volume **- Existing Conditions - PM Peak Hour**

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

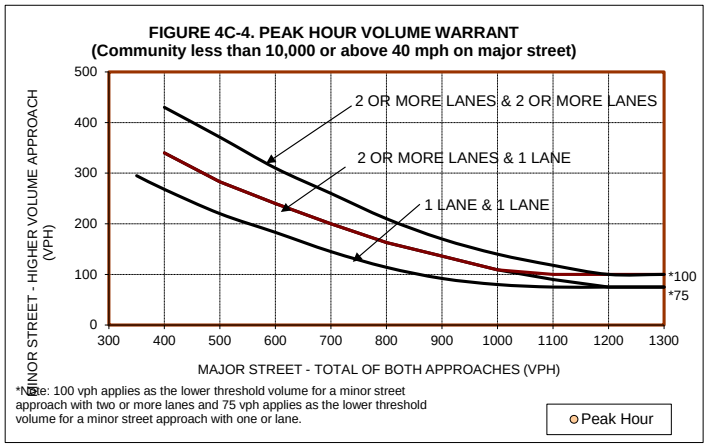
When the 85-percentile speed of the major street traffic exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the peak hour volume requirement is satisfied when the plotted point referred to above falls above the curve in Figure 4-6 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	2
Minor Street	1

Peak Hour

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
4:00 PM	151	345



Warrant	Not Met

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
350	295			
400	268	340	340	430
500	220	283	283	371
600	183	240	240	310
700	145	200	200	260
800	114	163	163	210
900	92	136	136	170
1000	80	109	109	140
1100	75	100	90	118
1200	75	100	75	100
1300	75	100	75	100

FEHR PEERS

Major Street	Alta Road	Project	RJ Donovan Transportation Assessment
Minor Street	Donovan State Prison Road	Scenario	Existing + Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	559	0	1	0
Through	142	38	0	0
Right	0	1	15	0
Total	701	39	16	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	10.9
Approach with Worst Case Delay	NB
Total Vehicles on Approach	701

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing + Project	**2.1**	**16**	**756**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

California MUTCD 2014 Edition
(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)
Chapter 4C – Traffic Control Signal Needs Studies
Part 4 – Highway Traffic Signals
Pages 830-1

Section 4C.04 Warrant 3, Peak Hour

Support:

01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

02 This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

03 The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and

2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and

3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.

B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Option:

04 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to evaluate the criteria in the second category of the Standard.

05 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal may be operated in the flashing mode during the hours that the volume criteria of this warrant are not met.

Guidance:

06 If this warrant is the only warrant met and a traffic control signal is justified by an engineering study, the traffic control signal should be traffic-actuated.

FEHR PEERS

Major Street	Alta Road	Project	RJ Donovan Transportation Assessment
Minor Street	Donovan State Prison Road	Scenario	Existing + Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	0	1	0
Through	55	91	0	0
Right	0	1	406	0
Total	59	92	407	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11.3
Approach with Worst Case Delay	NB
Total Vehicles on Approach	59

Warrant 3A, Peak Hour

	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Serviced (vph)
Existing + Project	**0.2**	**407**	**558**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Met**	**Not Met**
Warrant Met	**NO**		

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Section 4C.04 Warrant 3, Peak Hour

Support:

01 The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

02 This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

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B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Option:

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Warrant 3B: Peak Hour Volume **- Existing Plus Project - AM Peak Hour**

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

When the 85-percentile speed of the major street traffic exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the peak hour volume requirement is satisfied when the plotted point referred to above falls above the curve in Figure 4-6 for the existing combination of approach lanes.

Analysis

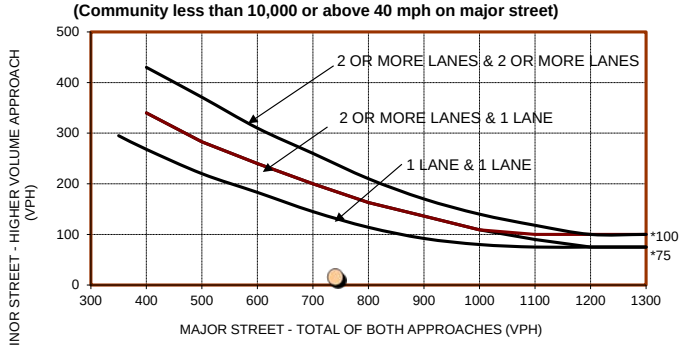
	No of lanes
Major Street	2
Minor Street	1

Peak Hour

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
7:15 AM	740	16

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
350	295			
400	268	340	340	430
500	220	283	283	371
600	183	240	240	310
700	145	200	200	260
800	114	163	163	210
900	92	136	136	170
1000	80	109	109	140
1100	75	100	90	118
1200	75	100	75	100
1300	75	100	75	100

FIGURE 4C-4. PEAK HOUR VOLUME WARRANT
(Community less than 10,000 or above 40 mph on major street)



*Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one or lane.

Warrant	Not Met

Warrant 3B: Peak Hour Volume **- Existing Plus Project - PM Peak Hour**

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

When the 85-percentile speed of the major street traffic exceeds 40 mile per hour or when the intersection lies within a built-up area of an isolated community having a population less than 10,000, the peak hour volume requirement is satisfied when the plotted point referred to above falls above the curve in Figure 4-6 for the existing combination of approach lanes.

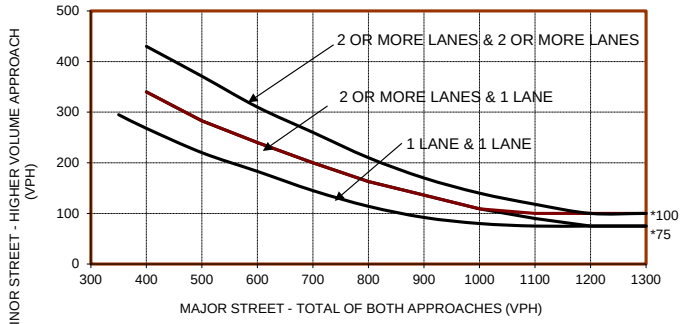
Analysis

	No of lanes
Major Street	2
Minor Street	1

Peak Hour

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
4:00 PM	151	407

FIGURE 4C-4. PEAK HOUR VOLUME WARRANT
(Community less than 10,000 or above 40 mph on major street)



*Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one or lane.

Warrant	Not Met

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
350	295			
400	268	340	340	430
500	220	283	283	371
600	183	240	240	310
700	145	200	200	260
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1000	80	109	109	140
1100	75	100	90	118
1200	75	100	75	100
1300	75	100	75	100