

Appendix C

**Greenhouse Gas Emissions Data, Energy
Data, and Noise Modeling Data**

CalEEMod VMT Calculator (UNMITIGATED SCENARIO)

This calcultor was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Trip Length (Miles)			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship (Mosque)	9.50	7.30	7.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	10.80	4.80	5.70	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166.21	188.27	638.66	1657.98

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use		trip length							Trip Length
		link % primary	primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	
Place of Worship (Mosque)		64.0%	9.50	25.0%	0.25	9.5	11.0%	0.1	6.7
H-W or c-w		64.0%	9.50	25.0%	0.25	9.5	11.0%	0.1	6.7
h-s or c-c		64.0%	7.30	25.0%	0.25	7.3	11.0%	0.1	5.1
h-o or c-o		64.0%	7.30	25.0%	0.25	7.3	11.0%	0.1	5.1
Single Family Home		86.0%	10.8	11.0%	0.25	10.8	3.0%	0.1	9.6
H-W or c-w		86.0%	10.8	11.0%	0.25	10.8	3.0%	0.1	9.6
h-s or c-c		86.0%	4.8	11.0%	0.25	4.8	3.0%	0.1	4.3
h-o or c-o		86.0%	5.7	11.0%	0.25	5.7	3.0%	0.1	5.1

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	6.7	-	
h-s or c-c	1,512	5.1	7,772	
h-o or c-o	80	5.1	409	
Total VMT			8,181	425,408
Single Family Home				
H-W or c-w	21	9.6	197	
h-s or c-c	10	4.3	42	
h-o or c-o	36	5.1	181	
Total VMT			420	21,819

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	8,600.51			
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714	
Calculated Annual VMT	447,227	#REF!		

CalEEMod VMT Calculator (MITIGATED SCENARIO)

This calcultor was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculates the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the MITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Daily VMT		
Daily VMT Provided by Traffic Study	8,150	57,206.65
Annual VMT	2,974,750	2,974,746

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Miles			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-O	Primary	Diverted	Pass-by
Place of Worship (Mosque)	9.50	50.00	41.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	30.00	30.00	30.03	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166	188	639	1658

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use					trip length				
Place of Worship (Mosque)	link % primary	trip length primary	link % diverted	Constant (0.25)	primary	link % passby	constant	Trip Length	
H-W or c-w	64.0%	9.50	25.0%	0.25	9.5	11.0%	0.1	6.7	
h-s or c-c	64.0%	50.00	25.0%	0.25	50	11.0%	0.1	35.1	
h-o or c-o	64.0%	41.30	25.0%	0.25	41.3	11.0%	0.1	29.0	
Single Family Home									
H-W or c-w	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6	
h-s or c-c	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6	
h-o or c-o	86.0%	30.03	11.0%	0.25	30.03	3.0%	0.1	26.7	

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	6.7	-	
h-s or c-c	1,512	35.1	53,135	
h-o or c-o	80	29.0	2,310	
Total VMT			55,445	2,883,129.19
Single Family Home				
H-W or c-w	21	26.6	546	
h-s or c-c	10	26.6	264	
h-o or c-o	36	26.7	952	
Total VMT			1,762	91,617

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	57,206.65	
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000 52.14285714
Calculated Annual VMT	2,974,746	#REF!

CalEEMod VMT Calculator (UNMITIGATED SCENARIO)

This calcultor was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Trip Length (Miles)			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship (Mosque)	14.70	6.60	6.60	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	10.80	4.80	5.70	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
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Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166.21	188.27	638.66	1657.98

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use		trip length							
Place of Worship (Mosque)	link % primary	primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length	
H-W or c-w	64.0%	14.70	25.0%	0.25	14.7	11.0%	0.1	10.3	
h-s or c-c	64.0%	6.60	25.0%	0.25	6.6	11.0%	0.1	4.6	
h-o or c-o	64.0%	6.60	25.0%	0.25	6.6	11.0%	0.1	4.6	
Single Family Home									
H-W or c-w	86.0%	10.8	11.0%	0.25	10.8	3.0%	0.1	9.6	
h-s or c-c	86.0%	4.8	11.0%	0.25	4.8	3.0%	0.1	4.3	
h-o or c-o	86.0%	5.7	11.0%	0.25	5.7	3.0%	0.1	5.1	

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	10.3	-	
h-s or c-c	1,512	4.6	7,028	
h-o or c-o	80	4.6	370	
Total VMT			7,398	384,702.39
Single Family Home				
H-W or c-w	21	9.6	197	
h-s or c-c	10	4.3	42	
h-o or c-o	36	5.1	181	
Total VMT			420	21,819

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	7,817.72		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	406,522	406,522	
			1,114

CalEEMod VMT Calculator (MITIGATED SCENARIO)

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Daily VMT		
Daily VMT Provided by Traffic Study	8,150	
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Trip Type

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	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-O	Primary	Diverted	Pass-by
Place of Worship (Mosque)	30.00	50.00	41.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	30.00	30.00	30.03	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

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Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use								
Place of Worship (Mosque)	link % primary	trip length primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length
H-W or c-w	64.0%	30.00	25.0%	0.25	30	11.0%	0.1	21.1
h-s or c-c	64.0%	50.00	25.0%	0.25	50	11.0%	0.1	35.1
h-o or c-o	64.0%	41.30	25.0%	0.25	41.3	11.0%	0.1	29.0
Single Family Home								
H-W or c-w	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6
h-s or c-c	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6
h-o or c-o	86.0%	30.03	11.0%	0.25	30.03	3.0%	0.1	26.7

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	21.1	-	
h-s or c-c	1,512	35.1	53,135	
h-o or c-o	80	29.0	2,310	
Total VMT			55,445	2,883,129

Single Family Home				
H-W or c-w	21	26.6	546	
h-s or c-c	10	26.6	264	
h-o or c-o	36	26.7	952	
Total VMT			1,762	91,617

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	57,206.65		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	2,974,746	2,974,746	(4.07)

Service Population Metric Calculation

California Land Use Sector Emissions Target (2014 Scoping Plan) (MT CO ₂ e/yr)	298,000,000
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2030 SP Metric Calculation

2030 adjusted (40% below 2020 target) CA Land Use Sector Emissions Target (MT CO ₂ e/yr)	178,800,000
2030 population estimate*	44,019,846
2030 employment estimate*	23,205,813
2030 SP	67,225,659
2030 MT/SP/YR Metric	2.66

2050 SP Metric Calculation

2050 adjusted (80% below 2020 target) CA Land Use Sector Emissions Target (MT CO ₂ e/yr)	59,600,000
2050 population estimate*	49,158,401
2050 employment estimate*	25,640,102.8
2050 SP	74,798,504
2050 MT/SP/YR Metric	0.80

Notes:

Employment estimated based on 2020 values in BAAQMD 2011 (20,194,661) and applies 14.9 percent increase over a 10-year period

Population Estimates based on Report P-1 (County): State and County Total Population Projections, 2010-2060 (5-year increments). California Department of Finance. Available at: http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

Cordoba Center - Santa Clara County, Annual

Cordoba Center
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	19.70	1000sqft	1.28	19,700.00	0
Parking Lot	53.20	1000sqft	1.22	53,200.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,400.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated 2018 PG&E emissions factor

Land Use - Cartaker Dwelling size provided in the Project Description

Construction Phase -

Off-road Equipment -

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblAreaCoating	Area_EF_Parking	150	0
tblLandUse	BuildingSpaceSquareFeet	1,800.00	3,400.00
tblLandUse	LandUseSquareFeet	1,800.00	3,400.00
tblLandUse	LotAcreage	0.45	1.28
tblProjectCharacteristics	CO2IntensityFactor	641.35	328
tblProjectCharacteristics	OperationalYear	2018	2021

2.0 Emissions Summary

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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					
2018	0.3865	2.8625	2.1589	3.8600e-003	0.0691	0.1610	0.2301	0.0245	0.1537	0.1782	0.0000	334.4130	334.4130	0.0636	0.0000	336.0027
2019	0.5092	0.0167	0.0181	3.0000e-005	4.3000e-004	1.1600e-003	1.5900e-003	1.1000e-004	1.1600e-003	1.2800e-003	0.0000	2.6771	2.6771	2.0000e-004	0.0000	2.6822
Maximum	0.5092	2.8625	2.1589	3.8600e-003	0.0691	0.1610	0.2301	0.0245	0.1537	0.1782	0.0000	334.4130	334.4130	0.0636	0.0000	336.0027

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3865	2.8625	2.1588	3.8600e-003	0.0691	0.1610	0.2301	0.0245	0.1537	0.1782	0.0000	334.4127	334.4127	0.0636	0.0000	336.0023
2019	0.5092	0.0167	0.0181	3.0000e-005	4.3000e-004	1.1600e-003	1.5900e-003	1.1000e-004	1.1600e-003	1.2800e-003	0.0000	2.6771	2.6771	2.0000e-004	0.0000	2.6822
Maximum	0.5092	2.8625	2.1588	3.8600e-003	0.0691	0.1610	0.2301	0.0245	0.1537	0.1782	0.0000	334.4127	334.4127	0.0636	0.0000	336.0023

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	0.8252	0.8252
2	4-1-2018	6-30-2018	0.8283	0.8283
3	7-1-2018	9-30-2018	0.8374	0.8374
4	10-1-2018	12-31-2018	0.7515	0.7515
5	1-1-2019	3-31-2019	0.5009	0.5009
		Highest	0.8374	0.8374

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	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803
Energy	3.0100e-003	0.0272	0.0222	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	62.6879	62.6879	3.4800e-003	1.1500e-003	63.1171
Mobile	0.0633	0.2531	0.6819	2.1500e-003	0.1893	1.8900e-003	0.1912	0.0507	1.7600e-003	0.0524	0.0000	196.6230	196.6230	7.1800e-003	0.0000	196.8026
Waste						0.0000	0.0000		0.0000	0.0000	23.0496	0.0000	23.0496	1.3622	0.0000	57.1045
Water						0.0000	0.0000		0.0000	0.0000	0.2162	1.0721	1.2883	0.0223	5.4000e-004	2.0080
Total	0.1788	0.2806	0.7207	2.3300e-003	0.1893	5.2500e-003	0.1945	0.0507	5.1200e-003	0.0558	23.3930	260.4277	283.8206	1.3954	1.7000e-003	319.2124

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803
Energy	3.0100e-003	0.0272	0.0222	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	62.6879	62.6879	3.4800e-003	1.1500e-003	63.1171
Mobile	0.0633	0.2531	0.6819	2.1500e-003	0.1893	1.8900e-003	0.1912	0.0507	1.7600e-003	0.0524	0.0000	196.6230	196.6230	7.1800e-003	0.0000	196.8026
Waste						0.0000	0.0000		0.0000	0.0000	23.0496	0.0000	23.0496	1.3622	0.0000	57.1045
Water						0.0000	0.0000		0.0000	0.0000	0.2162	1.0721	1.2883	0.0223	5.4000e-004	2.0080
Total	0.1788	0.2806	0.7207	2.3300e-003	0.1893	5.2500e-003	0.1945	0.0507	5.1200e-003	0.0558	23.3930	260.4277	283.8206	1.3954	1.7000e-003	319.2124

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

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	1/5/2018	5	3	
2	Grading	Grading	1/6/2018	1/17/2018	5	6	
3	Building Construction	Building Construction	1/18/2018	12/5/2018	5	220	
4	Paving	Paving	12/6/2018	12/31/2018	5	10	
5	Architectural Coating	Architectural Coating	1/1/2019	1/24/2019	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 1.22

Residential Indoor: 6,885; Residential Outdoor: 2,295; Non-Residential Indoor: 29,550; Non-Residential Outdoor: 9,850; Striped Parking Area: 3,192 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	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	31.00	12.00	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	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction**3.2 Site Preparation - 2018****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					3.9800e-003	0.0000	3.9800e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7500e-003	0.0591	0.0319	6.0000e-005		2.3900e-003	2.3900e-003		2.1900e-003	2.1900e-003	0.0000	5.5983	5.5983	1.7400e-003	0.0000	5.6418
Total	4.7500e-003	0.0591	0.0319	6.0000e-005	3.9800e-003	2.3900e-003	6.3700e-003	4.3000e-004	2.1900e-003	2.6200e-003	0.0000	5.5983	5.5983	1.7400e-003	0.0000	5.6418

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1447	0.1447	0.0000	0.0000	0.1448
Total	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1447	0.1447	0.0000	0.0000	0.1448

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3.2 Site Preparation - 2018**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					3.9800e-003	0.0000	3.9800e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7500e-003	0.0591	0.0319	6.0000e-005		2.3900e-003	2.3900e-003		2.1900e-003	2.1900e-003	0.0000	5.5983	5.5983	1.7400e-003	0.0000	5.6418
Total	4.7500e-003	0.0591	0.0319	6.0000e-005	3.9800e-003	2.3900e-003	6.3700e-003	4.3000e-004	2.1900e-003	2.6200e-003	0.0000	5.5983	5.5983	1.7400e-003	0.0000	5.6418

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1447	0.1447	0.0000	0.0000	0.1448
Total	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1447	0.1447	0.0000	0.0000	0.1448

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3.3 Grading - 2018**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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6100e-003	0.0972	0.0415	8.0000e-005		4.6700e-003	4.6700e-003		4.3000e-003	4.3000e-003	0.0000	7.5386	7.5386	2.3500e-003	0.0000	7.5973
Total	8.6100e-003	0.0972	0.0415	8.0000e-005	0.0262	4.6700e-003	0.0309	0.0135	4.3000e-003	0.0178	0.0000	7.5386	7.5386	2.3500e-003	0.0000	7.5973

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2894	0.2894	1.0000e-005	0.0000	0.2897
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2894	0.2894	1.0000e-005	0.0000	0.2897

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3.3 Grading - 2018**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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6100e-003	0.0972	0.0415	8.0000e-005		4.6700e-003	4.6700e-003		4.3000e-003	4.3000e-003	0.0000	7.5386	7.5386	2.3500e-003	0.0000	7.5973
Total	8.6100e-003	0.0972	0.0415	8.0000e-005	0.0262	4.6700e-003	0.0309	0.0135	4.3000e-003	0.0178	0.0000	7.5386	7.5386	2.3500e-003	0.0000	7.5973

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2894	0.2894	1.0000e-005	0.0000	0.2897
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2894	0.2894	1.0000e-005	0.0000	0.2897

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3.4 Building Construction - 2018**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	0.3350	2.3814	1.8076	2.8800e-003		0.1446	0.1446		0.1386	0.1386	0.0000	243.0568	243.0568	0.0524	0.0000	244.3658
Total	0.3350	2.3814	1.8076	2.8800e-003		0.1446	0.1446		0.1386	0.1386	0.0000	243.0568	243.0568	0.0524	0.0000	244.3658

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	7.5600e-003	0.1850	0.0515	3.8000e-004	9.0800e-003	1.4800e-003	0.0106	2.6200e-003	1.4200e-003	4.0400e-003	0.0000	36.5261	36.5261	1.8900e-003	0.0000	36.5735
Worker	0.0144	0.0110	0.1124	2.9000e-004	0.0283	1.9000e-004	0.0285	7.5200e-003	1.8000e-004	7.7000e-003	0.0000	25.7962	25.7962	7.7000e-004	0.0000	25.8155
Total	0.0219	0.1960	0.1639	6.7000e-004	0.0374	1.6700e-003	0.0390	0.0101	1.6000e-003	0.0117	0.0000	62.3223	62.3223	2.6600e-003	0.0000	62.3890

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3.4 Building Construction - 2018**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	0.3350	2.3814	1.8076	2.8800e-003		0.1446	0.1446		0.1386	0.1386	0.0000	243.0565	243.0565	0.0524	0.0000	244.3655
Total	0.3350	2.3814	1.8076	2.8800e-003		0.1446	0.1446		0.1386	0.1386	0.0000	243.0565	243.0565	0.0524	0.0000	244.3655

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	7.5600e-003	0.1850	0.0515	3.8000e-004	9.0800e-003	1.4800e-003	0.0106	2.6200e-003	1.4200e-003	4.0400e-003	0.0000	36.5261	36.5261	1.8900e-003	0.0000	36.5735
Worker	0.0144	0.0110	0.1124	2.9000e-004	0.0283	1.9000e-004	0.0285	7.5200e-003	1.8000e-004	7.7000e-003	0.0000	25.7962	25.7962	7.7000e-004	0.0000	25.8155
Total	0.0219	0.1960	0.1639	6.7000e-004	0.0374	1.6700e-003	0.0390	0.0101	1.6000e-003	0.0117	0.0000	62.3223	62.3223	2.6600e-003	0.0000	62.3890

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3.5 Paving - 2018**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	0.0126	0.1283	0.1078	1.6000e-004		7.6500e-003	7.6500e-003		7.0500e-003	7.0500e-003	0.0000	14.4861	14.4861	4.4200e-003	0.0000	14.5967
Paving	2.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0155	0.1283	0.1078	1.6000e-004		7.6500e-003	7.6500e-003		7.0500e-003	7.0500e-003	0.0000	14.4861	14.4861	4.4200e-003	0.0000	14.5967

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	5.4000e-004	4.2000e-004	4.2600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9769	0.9769	3.0000e-005	0.0000	0.9776
Total	5.4000e-004	4.2000e-004	4.2600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9769	0.9769	3.0000e-005	0.0000	0.9776

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3.5 Paving - 2018**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	0.0126	0.1283	0.1078	1.6000e-004		7.6500e-003	7.6500e-003		7.0500e-003	7.0500e-003	0.0000	14.4861	14.4861	4.4200e-003	0.0000	14.5967
Paving	2.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0155	0.1283	0.1078	1.6000e-004		7.6500e-003	7.6500e-003		7.0500e-003	7.0500e-003	0.0000	14.4861	14.4861	4.4200e-003	0.0000	14.5967

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	5.4000e-004	4.2000e-004	4.2600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9769	0.9769	3.0000e-005	0.0000	0.9776
Total	5.4000e-004	4.2000e-004	4.2600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9769	0.9769	3.0000e-005	0.0000	0.9776

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3.6 Architectural Coating - 2019**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	0.5066					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-003	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3028
Total	0.5090	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3028

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	2.0000e-004	1.5000e-004	1.5100e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3791	0.3791	1.0000e-005	0.0000	0.3794
Total	2.0000e-004	1.5000e-004	1.5100e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3791	0.3791	1.0000e-005	0.0000	0.3794

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3.6 Architectural Coating - 2019**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	0.5066					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-003	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3028
Total	0.5090	0.0165	0.0166	3.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	2.2979	2.2979	1.9000e-004	0.0000	2.3028

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	2.0000e-004	1.5000e-004	1.5100e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3791	0.3791	1.0000e-005	0.0000	0.3794
Total	2.0000e-004	1.5000e-004	1.5100e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3791	0.3791	1.0000e-005	0.0000	0.3794

4.0 Operational Detail - Mobile

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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	0.0633	0.2531	0.6819	2.1500e-003	0.1893	1.8900e-003	0.1912	0.0507	1.7600e-003	0.0524	0.0000	196.6230	196.6230	7.1800e-003	0.0000	196.8026
Unmitigated	0.0633	0.2531	0.6819	2.1500e-003	0.1893	1.8900e-003	0.1912	0.0507	1.7600e-003	0.0524	0.0000	196.6230	196.6230	7.1800e-003	0.0000	196.8026

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	179.47	204.29	721.61	487,243	487,243
Single Family Housing	9.52	9.91	8.62	21,819	21,819
Total	188.99	214.20	730.23	509,062	509,062

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Parking Lot	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Single Family Housing	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.9318	32.9318	2.9100e-003	6.0000e-004	33.1841
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	32.9318	32.9318	2.9100e-003	6.0000e-004	33.1841
NaturalGas Mitigated	3.0100e-003	0.0272	0.0222	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.7561	29.7561	5.7000e-004	5.5000e-004	29.9329
NaturalGas Unmitigated	3.0100e-003	0.0272	0.0222	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.7561	29.7561	5.7000e-004	5.5000e-004	29.9329

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Place of Worship	521656	2.8100e-003	0.0256	0.0215	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.8376	27.8376	5.3000e-004	5.1000e-004	28.0030
Single Family Housing	35952.6	1.9000e-004	1.6600e-003	7.0000e-004	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9186	1.9186	4.0000e-005	4.0000e-005	1.9300
Total		3.0000e-003	0.0272	0.0222	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.7561	29.7561	5.7000e-004	5.5000e-004	29.9330

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					
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
Place of Worship	521656	2.8100e-003	0.0256	0.0215	1.5000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	27.8376	27.8376	5.3000e-004	5.1000e-004	28.0030
Single Family Housing	35952.6	1.9000e-004	1.6600e-003	7.0000e-004	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9186	1.9186	4.0000e-005	4.0000e-005	1.9300
Total		3.0000e-003	0.0272	0.0222	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.7561	29.7561	5.7000e-004	5.5000e-004	29.9330

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	46816	6.9652	6.2000e-004	1.3000e-004	7.0186
Place of Worship	165874	24.6785	2.1800e-003	4.5000e-004	24.8675
Single Family Housing	8658.17	1.2882	1.1000e-004	2.0000e-005	1.2980
Total		32.9318	2.9100e-003	6.0000e-004	33.1841

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	46816	6.9652	6.2000e-004	1.3000e-004	7.0186
Place of Worship	165874	24.6785	2.1800e-003	4.5000e-004	24.8675
Single Family Housing	8658.17	1.2882	1.1000e-004	2.0000e-005	1.2980
Total		32.9318	2.9100e-003	6.0000e-004	33.1841

6.0 Area Detail

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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	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803
Unmitigated	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803

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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	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0937					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.9000e-004	9.0000e-005	8.1100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0134	0.0134	2.0000e-005	0.0000	0.0138
Total	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803

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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	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0937					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.9000e-004	9.0000e-005	8.1100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0134	0.0134	2.0000e-005	0.0000	0.0138
Total	0.1125	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0446	0.1718	2.6000e-004	1.0000e-005	0.1803

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2883	0.0223	5.4000e-004	2.0080
Unmitigated	1.2883	0.0223	5.4000e-004	2.0080

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.616391 / 0.9641	1.1938	0.0202	4.9000e-004	1.8449
Single Family Housing	0.065154 / 0.0410754	0.0945	2.1300e-003	5.0000e-005	0.1631
Total		1.2883	0.0223	5.4000e-004	2.0080

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.616391 / 0.9641	1.1938	0.0202	4.9000e-004	1.8449
Single Family Housing	0.065154 / 0.0410754	0.0945	2.1300e-003	5.0000e-005	0.1631
Total		1.2883	0.0223	5.4000e-004	2.0080

8.0 Waste Detail**8.1 Mitigation Measures Waste**

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.0496	1.3622	0.0000	57.1045
Unmitigated	23.0496	1.3622	0.0000	57.1045

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.29	22.7939	1.3471	0.0000	56.4708
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Total		23.0496	1.3622	0.0000	57.1045

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.29	22.7939	1.3471	0.0000	56.4708
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Total		23.0496	1.3622	0.0000	57.1045

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
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Boilers

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	17.20	1000sqft	0.39	17,200.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,380.00	3

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated PG&E emissions factors were obtained from the following link:
https://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

Land Use - Single Family home adjusted to reflect project description Caretake Dwelling.

Vehicle Trips - Trip adjustments made to reflect annual VMT in the traffic study developed for Project.

Energy Use - Energy Use updated to reflect 2016 Title 24 Standards. (5% for non-Res and 28% for Res)

Water And Wastewater - Warehouse is modeled as Maintenance building for project and is assumed to have minimal water use.

Solid Waste - Warehouse is modeled as Maintenance building for project and is assumed to have minimal water use.

Land Use Change -

Sequestration -

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Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.17	3.01
tblEnergyUse	LightingElect	1,608.84	1,528.39
tblEnergyUse	T24E	1.55	1.47
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	19.81	18.81
tblEnergyUse	T24NG	32,797.58	23,614.25
tblLandUse	BuildingSpaceSquareFeet	1,800.00	3,380.00
tblLandUse	LandUseSquareFeet	1,800.00	3,380.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	100.00
tblVehicleTrips	CC_TL	6.60	50.00
tblVehicleTrips	CNW_TL	6.60	41.30
tblVehicleTrips	CW_TL	14.70	30.00
tblVehicleTrips	HO_TL	5.70	30.02
tblVehicleTrips	HS_TL	4.80	30.00
tblVehicleTrips	HW_TL	10.80	30.00

2.0 Emissions Summary

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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					
2017	0.1919	0.7588	0.5007	7.6000e-004	5.9800e-003	0.0498	0.0557	1.7800e-003	0.0460	0.0478	0.0000	70.3393	70.3393	0.0187	0.0000	70.8067
Maximum	0.1919	0.7588	0.5007	7.6000e-004	5.9800e-003	0.0498	0.0557	1.7800e-003	0.0460	0.0478	0.0000	70.3393	70.3393	0.0187	0.0000	70.8067

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					
2017	0.1919	0.7588	0.5007	7.6000e-004	5.9800e-003	0.0498	0.0557	1.7800e-003	0.0460	0.0478	0.0000	70.3392	70.3392	0.0187	0.0000	70.8066
Maximum	0.1919	0.7588	0.5007	7.6000e-004	5.9800e-003	0.0498	0.0557	1.7800e-003	0.0460	0.0478	0.0000	70.3392	70.3392	0.0187	0.0000	70.8066

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-16-2017	9-15-2017	0.4584	0.4584
2	9-16-2017	9-30-2017	0.0778	0.0778
		Highest	0.4584	0.4584

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	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792
Energy	2.5100e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	44.4377	44.4377	2.4400e-003	8.6000e-004	44.7552
Mobile	0.1474	0.8586	2.9344	0.0117	1.1062	9.5900e-003	1.1158	0.2961	8.9700e-003	0.3051	0.0000	1,068.1734	1,068.1734	0.0307	0.0000	1,068.9396
Waste						0.0000	0.0000		0.0000	0.0000	20.1570	0.0000	20.1570	1.1912	0.0000	49.9381
Water						0.0000	0.0000		0.0000	0.0000	0.1914	0.8359	1.0273	0.0197	4.8000e-004	1.6643
Total	0.2477	0.8815	2.9691	0.0118	1.1062	0.0126	1.1188	0.2961	0.0120	0.3081	20.4755	1,113.4906	1,133.9661	1.2443	1.3500e-003	1,165.4765

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792
Energy	2.5100e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	44.4377	44.4377	2.4400e-003	8.6000e-004	44.7552
Mobile	0.1474	0.8586	2.9344	0.0117	1.1062	9.5900e-003	1.1158	0.2961	8.9700e-003	0.3051	0.0000	1,068.1734	1,068.1734	0.0307	0.0000	1,068.9396
Waste						0.0000	0.0000		0.0000	0.0000	20.1570	0.0000	20.1570	1.1912	0.0000	49.9381
Water						0.0000	0.0000		0.0000	0.0000	0.1914	0.8359	1.0273	0.0197	4.8000e-004	1.6643
Total	0.2477	0.8815	2.9691	0.0118	1.1062	0.0126	1.1188	0.2961	0.0120	0.3081	20.4755	1,113.4906	1,133.9661	1.2443	1.3500e-003	1,165.4765

[illegible]

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2.3 Vegetation**Vegetation**

	CO2e
Category	MT
New Trees	73.4000
Vegetation Land Change	-22.8430
Total	50.5570

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	6/16/2017	6/29/2017	5	10	
2	Site Preparation	Site Preparation	6/30/2017	6/30/2017	5	1	
3	Grading	Grading	7/1/2017	7/4/2017	5	2	
4	Building Construction	Building Construction	7/5/2017	11/21/2017	5	100	
5	Paving	Paving	11/22/2017	11/28/2017	5	5	
6	Architectural Coating	Architectural Coating	11/29/2017	12/5/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0****Acres of Paving: 0**

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Residential Indoor: 6,845; Residential Outdoor: 2,282; Non-Residential Indoor: 25,800; Non-Residential Outdoor: 8,600; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	3.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017

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	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3493	5.3493	1.0500e-003	0.0000	5.3755
Total	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3493	5.3493	1.0500e-003	0.0000	5.3755

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3.2 Demolition - 2017**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	2.3000e-004	1.8000e-004	1.8000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724
Total	2.3000e-004	1.8000e-004	1.8000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724

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	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3492	5.3492	1.0500e-003	0.0000	5.3755
Total	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3492	5.3492	1.0500e-003	0.0000	5.3755

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3.2 Demolition - 2017**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	2.3000e-004	1.8000e-004	1.8000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724
Total	2.3000e-004	1.8000e-004	1.8000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724

3.3 Site Preparation - 2017**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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	4.3000e-004	5.2600e-003	2.1800e-003	0.0000	2.7000e-004	2.4000e-004	5.1000e-004	3.0000e-005	2.2000e-004	2.5000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569

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3.3 Site Preparation - 2017**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0186	0.0186	0.0000	0.0000	0.0186
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0186	0.0186	0.0000	0.0000	0.0186

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	4.3000e-004	5.2600e-003	2.1800e-003	0.0000	2.7000e-004	2.4000e-004	5.1000e-004	3.0000e-005	2.2000e-004	2.5000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569

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3.3 Site Preparation - 2017**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	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0186	0.0186	0.0000	0.0000	0.0186
Total	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0186	0.0186	0.0000	0.0000	0.0186

3.4 Grading - 2017**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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	1.2100e-003	0.0105	7.9200e-003	1.0000e-005	7.5000e-004	7.3000e-004	1.4800e-003	4.1000e-004	7.0000e-004	1.1100e-003	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751

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3.4 Grading - 2017**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	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0744	0.0744	0.0000	0.0000	0.0745
Total	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0744	0.0744	0.0000	0.0000	0.0745

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	1.2100e-003	0.0105	7.9200e-003	1.0000e-005	7.5000e-004	7.3000e-004	1.4800e-003	4.1000e-004	7.0000e-004	1.1100e-003	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751

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3.4 Grading - 2017**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	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0744	0.0744	0.0000	0.0000	0.0745
Total	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0744	0.0744	0.0000	0.0000	0.0745

3.5 Building Construction - 2017**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	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8851	52.8851	0.0162	0.0000	53.2902
Total	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8851	52.8851	0.0162	0.0000	53.2902

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3.5 Building Construction - 2017**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	8.9000e-004	0.0204	5.9900e-003	4.0000e-005	8.9000e-004	1.8000e-004	1.0800e-003	2.6000e-004	1.8000e-004	4.3000e-004	0.0000	3.6687	3.6687	2.1000e-004	0.0000	3.6740
Worker	1.8100e-003	1.4200e-003	0.0144	3.0000e-005	3.1700e-003	2.0000e-005	3.1900e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.9766	2.9766	1.0000e-004	0.0000	2.9791
Total	2.7000e-003	0.0218	0.0204	7.0000e-005	4.0600e-003	2.0000e-004	4.2700e-003	1.1000e-003	2.0000e-004	1.2900e-003	0.0000	6.6452	6.6452	3.1000e-004	0.0000	6.6531

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	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8850	52.8850	0.0162	0.0000	53.2901
Total	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8850	52.8850	0.0162	0.0000	53.2901

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3.5 Building Construction - 2017**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	8.9000e-004	0.0204	5.9900e-003	4.0000e-005	8.9000e-004	1.8000e-004	1.0800e-003	2.6000e-004	1.8000e-004	4.3000e-004	0.0000	3.6687	3.6687	2.1000e-004	0.0000	3.6740
Worker	1.8100e-003	1.4200e-003	0.0144	3.0000e-005	3.1700e-003	2.0000e-005	3.1900e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.9766	2.9766	1.0000e-004	0.0000	2.9791
Total	2.7000e-003	0.0218	0.0204	7.0000e-005	4.0600e-003	2.0000e-004	4.2700e-003	1.1000e-003	2.0000e-004	1.2900e-003	0.0000	6.6452	6.6452	3.1000e-004	0.0000	6.6531

3.6 Paving - 2017**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	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781

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3.6 Paving - 2017**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	2.0000e-004	1.6000e-004	1.6200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3349	0.3349	1.0000e-005	0.0000	0.3351
Total	2.0000e-004	1.6000e-004	1.6200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3349	0.3349	1.0000e-005	0.0000	0.3351

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	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781

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3.6 Paving - 2017**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	2.0000e-004	1.6000e-004	1.6200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3349	0.3349	1.0000e-005	0.0000	0.3351
Total	2.0000e-004	1.6000e-004	1.6200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3349	0.3349	1.0000e-005	0.0000	0.3351

3.7 Architectural Coating - 2017**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	0.1135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	0.1143	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400

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3.7 Architectural Coating - 2017**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	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0372	0.0372	0.0000	0.0000	0.0372
Total	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0372	0.0372	0.0000	0.0000	0.0372

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	0.1135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	0.1143	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400

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3.7 Architectural Coating - 2017**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	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0372	0.0372	0.0000	0.0000	0.0372
Total	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0372	0.0372	0.0000	0.0000	0.0372

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

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1474	0.8586	2.9344	0.0117	1.1062	9.5900e-003	1.1158	0.2961	8.9700e-003	0.3051	0.0000	1,068.1734	1,068.1734	0.0307	0.0000	1,068.9396
Unmitigated	0.1474	0.8586	2.9344	0.0117	1.1062	9.5900e-003	1.1158	0.2961	8.9700e-003	0.3051	0.0000	1,068.1734	1,068.1734	0.0307	0.0000	1,068.9396

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	156.69	178.36	630.04	2,883,147	2,883,147
Single Family Housing	9.52	9.91	8.62	91,600	91,600
Total	166.21	188.27	638.66	2,974,748	2,974,748

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	30.00	50.00	41.30	0.00	95.00	5.00	64	25	11
Single Family Housing	30.00	30.00	30.02	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Place of Worship	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Single Family Housing	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.6221	19.6221	1.9600e-003	4.1000e-004	19.7922
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.6221	19.6221	1.9600e-003	4.1000e-004	19.7922
NaturalGas Mitigated	2.5100e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8155	24.8155	4.8000e-004	4.5000e-004	24.9630
NaturalGas Unmitigated	2.5100e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8155	24.8155	4.8000e-004	4.5000e-004	24.9630

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Place of Worship	438256	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3870	23.3870	4.5000e-004	4.3000e-004	23.5260
Single Family Housing	26769.3	1.4000e-004	1.2300e-003	5.2000e-004	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4285	1.4285	3.0000e-005	3.0000e-005	1.4370
Total		2.5000e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8155	24.8155	4.8000e-004	4.6000e-004	24.9630

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					
Place of Worship	438256	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3870	23.3870	4.5000e-004	4.3000e-004	23.5260
Single Family Housing	26769.3	1.4000e-004	1.2300e-003	5.2000e-004	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4285	1.4285	3.0000e-005	3.0000e-005	1.4370
Total		2.5000e-003	0.0227	0.0186	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8155	24.8155	4.8000e-004	4.6000e-004	24.9630

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	140696	18.5074	1.8500e-003	3.8000e-004	18.6678
Single Family Housing	8474.42	1.1147	1.1000e-004	2.0000e-005	1.1244
Total		19.6221	1.9600e-003	4.0000e-004	19.7922

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	140696	18.5074	1.8500e-003	3.8000e-004	18.6678
Single Family Housing	8474.42	1.1147	1.1000e-004	2.0000e-005	1.1244
Total		19.6221	1.9600e-003	4.0000e-004	19.7922

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792
Unmitigated	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792

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	0.0114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.4000e-004	9.0000e-005	7.6000e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0124	0.0124	1.0000e-005	0.0000	0.0128
Total	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792

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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	0.0114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.4000e-004	9.0000e-005	7.6000e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0124	0.0124	1.0000e-005	0.0000	0.0128
Total	0.0979	2.2000e-004	0.0162	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0437	0.1708	2.5000e-004	1.0000e-005	0.1792

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0273	0.0197	4.8000e-004	1.6643
Unmitigated	1.0273	0.0197	4.8000e-004	1.6643

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.538169 / 0.841752	0.9413	0.0176	4.3000e-004	1.5098
Single Family Housing	0.065154 / 0.0410754	0.0860	2.1300e-003	5.0000e-005	0.1545
Total		1.0273	0.0197	4.8000e-004	1.6644

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	0.538169 / 0.841752	0.9413	0.0176	4.3000e-004	1.5098
Single Family Housing	0.065154 / 0.0410754	0.0860	2.1300e-003	5.0000e-005	0.1545
Total		1.0273	0.0197	4.8000e-004	1.6644

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.1570	1.1912	0.0000	49.9381
Unmitigated	20.1570	1.1912	0.0000	49.9381

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	98.04	19.9012	1.1761	0.0000	49.3045
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Total		20.1570	1.1913	0.0000	49.9381

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	98.04	19.9012	1.1761	0.0000	49.3045
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Total		20.1570	1.1913	0.0000	49.9381

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	50.5570	0.0000	0.0000	50.5570

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11.1 Vegetation Land Change**Vegetation Type**

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	15.8 / 10.5	-22.8430	0.0000	0.0000	-22.8430
Total		-22.8430	0.0000	0.0000	-22.8430

11.2 Net New Trees**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Mixed Hardwood	100	73.4000	0.0000	0.0000	73.4000
Total		73.4000	0.0000	0.0000	73.4000

CalEEMod VMT Calculator (UNMITIGATED SCENARIO)

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Trip Length (Miles)			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship (Mosque)	9.50	7.30	7.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	10.80	4.80	5.70	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166.21	188.27	638.66	1657.98

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use	link % primary	trip length primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length
Place of Worship (Mosque)								
H-W or c-w	64.0%	9.50	25.0%	0.25	9.5	11.0%	0.1	6.7
h-s or c-c	64.0%	7.30	25.0%	0.25	7.3	11.0%	0.1	5.1
h-o or c-o	64.0%	7.30	25.0%	0.25	7.3	11.0%	0.1	5.1
Single Family Home								
H-W or c-w	86.0%	10.8	11.0%	0.25	10.8	3.0%	0.1	9.6
h-s or c-c	86.0%	4.8	11.0%	0.25	4.8	3.0%	0.1	4.3
h-o or c-o	86.0%	5.7	11.0%	0.25	5.7	3.0%	0.1	5.1

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	6.7	-	
h-s or c-c	1,512	5.1	7,772	
h-o or c-o	80	5.1	409	
Total VMT			8,181	425,408
Single Family Home				
H-W or c-w	21	9.6	197	
h-s or c-c	10	4.3	42	
h-o or c-o	36	5.1	181	
Total VMT			420	21,819

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	8,600.51		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	447,227	#REF!	

CalEEMod VMT Calculator (MITIGATED SCENARIO)

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the MITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Daily VMT		
Daily VMT Provided by Traffic Study	8,150	57,206.65
Annual VMT	2,974,750	2,974,746

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Miles			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-O	Primary	Diverted	Pass-by
Place of Worship (Mosque)	9.50	50.00	41.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	30.00	30.00	30.03	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 + Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166	188	639	1658

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use

Place of Worship (Mosque)	link % primary	trip length primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length
H-W or c-w	64.0%	9.50	25.0%	0.25	9.5	11.0%	0.1	6.7
h-s or c-c	64.0%	50.00	25.0%	0.25	50	11.0%	0.1	35.1
h-o or c-o	64.0%	41.30	25.0%	0.25	41.3	11.0%	0.1	29.0
Single Family Home	link % primary	trip length primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length
H-W or c-w	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6
h-s or c-c	86.0%	30	11.0%	0.25	30	3.0%	0.1	26.6
h-o or c-o	86.0%	30.03	11.0%	0.25	30.03	3.0%	0.1	26.7

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	6.7	-	
h-s or c-c	1,512	35.1	53,135	
h-o or c-o	80	29.0	2,310	
Total VMT			55,445	2,883,129.19
Single Family Home	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	21	26.6	546	
h-s or c-c	10	26.6	264	
h-o or c-o	36	26.7	952	
Total VMT			1,762	91,617

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	57,206.65		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	2,974,746	#REF!	

CalEEMod VMT Calculator (UNMITIGATED SCENARIO)

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Trip Length (Miles)			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship (Mosque)	14.70	6.60	6.60	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	10.80	4.80	5.70	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166.21	188.27	638.66	1657.98

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use

	link % primary	trip length primary	link % diverted	Constant (0.25)	trip length primary	link % passby	constant	Trip Length
Place of Worship (Mosque)								
H-W or c-w	64.0%	14.70	25.0%	0.25	14.7	11.0%	0.1	10.3
h-s or c-c	64.0%	6.60	25.0%	0.25	6.6	11.0%	0.1	4.6
h-o or c-o	64.0%	6.60	25.0%	0.25	6.6	11.0%	0.1	4.6
Single Family Home								
H-W or c-w	86.0%	10.8	11.0%	0.25	10.8	3.0%	0.1	9.6
h-s or c-c	86.0%	4.8	11.0%	0.25	4.8	3.0%	0.1	4.3
h-o or c-o	86.0%	5.7	11.0%	0.25	5.7	3.0%	0.1	5.1

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	10.3	-	
h-s or c-c	1,512	4.6	7,028	
h-o or c-o	80	4.6	370	
Total VMT			7,398	384,702.39
Single Family Home				
H-W or c-w	21	9.6	197	
h-s or c-c	10	4.3	42	
h-o or c-o	36	5.1	181	
Total VMT			420	21,819

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	7,817.72		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	406,522	406,522	
			1,114

CalEEMod VMT Calculator (MITIGATED SCENARIO)

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculates the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the MITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Daily VMT		
Daily VMT Provided by Traffic Study	8,150	
Annual VMT	2,974,750	2,974,746

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Miles			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-NW	H-w or C-W	H-S or C-C	H-O or C-O	Primary	Diverted	Pass-by
Place of Worship (Mosque)	30.00	50.00	41.30	0.0%	95.0%	5.0%	64.0%	25.0%	11.0%
Single Family Home	30.00	30.00	30.03	31.0%	15.0%	54.0%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 + Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			Total Trips (weekly)
	weekday	Saturday	Sunday	
Place of Worship (Mosque)	156.69	178.36	630.04	1591.85
Single Family Home	9.52	9.91	8.62	66.13
Total	166.21	188.27	638.66	1657.98

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use		link % primary	trip length primary	link % diverted	Constant (0.25)	trip length		link % passby	constant	Trip Length
						primary				
Place of Worship (Mosque)	H-W or c-w	64.0%	30.00	25.0%	0.25	30		11.0%	0.1	21.1
	h-s or c-c	64.0%	50.00	25.0%	0.25	50		11.0%	0.1	35.1
	h-o or c-o	64.0%	41.30	25.0%	0.25	41.3		11.0%	0.1	29.0
Single Family Home	H-W or c-w	86.0%	30	11.0%	0.25	30		3.0%	0.1	26.6
	h-s or c-c	86.0%	30	11.0%	0.25	30		3.0%	0.1	26.6
	h-o or c-o	86.0%	30.03	11.0%	0.25	30.03		3.0%	0.1	26.7

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Place of Worship (Mosque)	# trips	trip length	Weekly VMT	Annual VMT
H-W or c-w	0	21.1	-	
h-s or c-c	1,512	35.1	53,135	
h-o or c-o	80	29.0	2,310	
Total VMT			55,445	2,883,129

Single Family Home				
H-W or c-w	21	26.6	546	
h-s or c-c	10	26.6	264	
h-o or c-o	36	26.7	952	
Total VMT			1,762	91,617

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT from Each Land Use	57,206.65		
Weeks per Year CalEEMod Uses for Annual VMT	52.00	52.0000	52.14285714
Calculated Annual VMT	2,974,746	2,974,746	

(4.07)

Energy by Land Use - Natural Gas (Unmitigated)

	NaturalGas Use	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	MT/yr					
Place of Worship	438,084	0.0000	23.3778	23.3778	4.5000e-004	4.3000e-004	23.5168
Single Family Housing	26,770	0.0000	1.4286	1.4286	3.0000e-005	3.0000e-005	1.4370
Total		0.0000	24.8064	24.8064	4.8000e-004	4.6000e-004	24.9538

Energy by Land Use - Electricity (Unmitigated)

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	143,448	18.8694	1.8900e-003	3.9000e-004	19.0329
Single Family Housing	8,555	1.1253	1.1000e-004	2.0000e-005	1.1351
Total		19.9947	2.0000e-003	4.1000e-004	20.1680

	Natural Gas	Electricity	Natural Gas	Electricity
Land Use	kBTU/yr	kWh/yr	MMBtu/year	MWh/year
Place of Worship	438,084	143,448	438	143
Single Family Housing	26,770	8,555	27	9
Total	464,854	152,003	465	152

Energy Calculations Summary

Operational Fuel Use Summary (Annual)

Vehicle Class	Diesel Gallons	Gasoline Gallons
Passenger	460	53,787
Truck	20,889	52,919
Bus	1,221	680
Other	37	199
Total	22,608	107,584

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2014.
3. Annual VMT obtained from CalEEMod output file.

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel	Gasoline
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total	Total
1	9,821	999,653	63,853	73,674	999,653
2	367	41,164	0	367	41,164
TOTAL	10,189	1,040,817	63,853	74,041	1,040,817

Total Gasoline	1,040,817	gallons
Total Diesel	74,041	gallons

Instructions: Input all construction equipment by each phase and phase length and use CalEEMod outputs for amount, usage hours, horsepower, and load factor.

Phase 1 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	Graders	1	8	187	0.4	3	0.4	36
Site Preparation	Scrapers	1	8	367	0.48	3	0.48	101
Site Preparation	Tractors/Loaders/Backhoes	1	7	97	0.37	3	0.38	14
Grading	Graders	1	8.00	187	0.41	6	0.38	70
Grading	Rubber Tired Dozers	1	8.00	247	0.40	6	0.6	142
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	6	0.6	103
Building Construction	Cranes	1	7.00	231	0.29	220	0.3	1,496
Building Construction	Forklifts	2	8.00	89	0.20	220	0.2	627
Building Construction	Generator Sets	1	8.00	84	0.74	220	0.7	4,048
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37	220	0.4	876
Building Construction	Welders	3	8.00	46	0.45	220	0.5	2,459
Paving	Mortar/Cement Mixer	1	6.00	9	0.56	0	0.4	0

Phase 1 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Average Daily Factor	Diesel Fuel Usage
Paving	Pavers	1	8.00	130	0.42	0	0.4	0
Paving	Paving Equipment	1	8.00	132	0.36	0	0.4	0
Paving	Rollers	2	8.00	80	0.38	0	0.4	0
Architectural Coating	Air Compressors	1	6.00	78	0.48	0	0.5	0
TOTAL								9,821

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	Days per Year	Total Worker Trips	Total Vendor Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Average Daily Factor (worker and vendor)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	8	0	3	24	0	10.80	7.30	259.2	0	0.6	3,430	0
Architectural Coating	6	0	0	0	0	10.80	7.30	0.00	0.00	0.6	0	0
Building Construction	31	12	220	6,820	2,640	10.80	7.30	73,656	19,272.00	0.6	974,783	63,853
Grading	15	0	10	150	0	10.80	7.30	1,620	0.00	0.6	21,440	0
Paving	10	0	0	0	0	10.80	7.30	0	0.00	0.6	0	0
TOTAL											999,653	63,853

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

Phase 2 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	Rubber Tired Dozers	3	8	247	0.4	0	0.6	-
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	0	0.6	-
Grading	Excavators	2	8.00	158	0.38	0	0.6	-
Grading	Rubber Tired Dozers	2	8.00	247	0.40	0	0.6	-
Grading	Scrapers	2	8.00	367	0.48	0	0.6	-
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	0	0.6	-
Building Construction	Cranes	1	7.00	231	0.29	0	0.6	0
Building Construction	Forklifts	3	8.00	89	0.20	0	0.6	0
Building Construction	Generator Sets	1	8.00	84	0.74	0	0.6	0
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	0	0.6	
Building Construction	Welders	1	8.00	46	0.45	0	0.6	0

Phase 2 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Average Daily Factor	Diesel Fuel Usage
Paving	Cement and Mortar Mixes	1	6.00	130	0.42	10	0.4	66
Paving	Pavers	1	8.00	130	0.42	10	0.4	83
Paving	Paving Equipment	1	8.00	132	0.36	10	0.4	72
Paving	Rollers	2	8.00	80	0.38	10	0.4	92
Architectural Coating	Air Compressors	1	6.00	78	0.48	10	0.5	54
TOTAL								367

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	Days per Year	Total Worker Trips	Total Vendor Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Average Daily Factor (worker and vendor)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	8	0	0	0	0	10.80	7.30	0	0	0.6	0	0
Architectural Coating	6	0	18	108	0	10.80	7.30	1,166.40	0.00	0.6	15,436	0
Building Construction	31	100	0	0	0	10.80	7.30	0.00	0.00	0.6	0	0
Grading	15	0	0	0	0	10.80	7.30	0.00	0.00	0.6	0	0
Paving	10	0	18	180	0	10.80	7.30	1,944.00	0.00	0.6	25,727	0
TOTAL											41,164	0

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

EMFAC2011 Emission Rates

Region Type: County

Region: Santa Clara

Calendar Year: 2018

Season: Annual

Vehicle Classification: EMFAC2007 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 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
Santa Clara	2018	LDA	Aggregated	Aggregated	GAS	772,104	25,297,590	4,877,487	1031	0.00	24.53	22.06	5.52
Santa Clara	2018	LDT1	Aggregated	Aggregated	GAS	81,473	2,687,038	494,504	127	0.00	21.12		
Santa Clara	2018	LDT2	Aggregated	Aggregated	GAS	244,546	8,536,461	1,539,216	473	0.00	18.05		
Santa Clara	2018	T7 tractor construction	Aggregated	Aggregated	DSL	7246.4461	1053480.99	0	0.00	190.7759996	5.52		

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

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Santa Clara

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and

Region	CalYr	VehClass	Class	MdIYr	Speed
Santa Clara	2021	HHDT	Truck	Aggregated	Aggregated
Santa Clara	2021	HHDT	Truck	Aggregated	Aggregated
Santa Clara	2021	LDA	Passenger	Aggregated	Aggregated
Santa Clara	2021	LDA	Passenger	Aggregated	Aggregated
Santa Clara	2021	LDA	Passenger	Aggregated	Aggregated
Santa Clara	2021	LDT1	Truck	Aggregated	Aggregated
Santa Clara	2021	LDT1	Truck	Aggregated	Aggregated
Santa Clara	2021	LDT1	Truck	Aggregated	Aggregated
Santa Clara	2021	LDT2	Truck	Aggregated	Aggregated
Santa Clara	2021	LDT2	Truck	Aggregated	Aggregated
Santa Clara	2021	LHDT1	Truck	Aggregated	Aggregated
Santa Clara	2021	LHDT1	Truck	Aggregated	Aggregated
Santa Clara	2021	LHDT2	Truck	Aggregated	Aggregated
Santa Clara	2021	LHDT2	Truck	Aggregated	Aggregated
Santa Clara	2021	MCY	Passenger	Aggregated	Aggregated
Santa Clara	2021	MDV	Truck	Aggregated	Aggregated
Santa Clara	2021	MDV	Truck	Aggregated	Aggregated
Santa Clara	2021	MH	Other	Aggregated	Aggregated
Santa Clara	2021	MH	Other	Aggregated	Aggregated
Santa Clara	2021	MHDT	Truck	Aggregated	Aggregated
Santa Clara	2021	MHDT	Truck	Aggregated	Aggregated
Santa Clara	2021	OBUS	Bus	Aggregated	Aggregated
Santa Clara	2021	OBUS	Bus	Aggregated	Aggregated
Santa Clara	2021	SBUS	Bus	Aggregated	Aggregated
Santa Clara	2021	SBUS	Bus	Aggregated	Aggregated
Santa Clara	2021	UBUS	Bus	Aggregated	Aggregated
Santa Clara	2021	UBUS	Bus	Aggregated	Aggregated

Project VMT (mi/yr)

2,974,750

From CalEEMod output

Project Mobile Emissions (MT/yr)

1,068

From CalEEMod output

	Gas (gal)	Diesel (gal)
Passenger	53,787	460
Truck	52,919	20,889
Bus	680	1,221
Other	199	37
Total	107,584	22,608

RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Fuel	Population VMT (mi/day)		Trips	Fuel_Consumption (1000 gal/day)	Fuel (gal/day)
GAS	77.07497	9679.384584	1542.116	2.044095758	2044.095758
DSL	6992.465	973511.0205	0	167.1569651	167156.9651
GAS	793418.1	27557998.38	5006865	896.4493947	896449.3947
DSL	8349.198	307394.5205	52420.3	7.734075918	7734.075918
ELEC	22211.62	1065040.67	144632.1	0	0
GAS	55604.65	1779026.411	340598.1	68.90203008	68902.03008
DSL	57.38655	1316.856026	281.0615	0.044527717	44.527717
ELEC	41.07466	1176.43648	245.3667	0	0
GAS	253305.2	8739291.697	1598368	383.9284275	383928.4275
DSL	474.8502	17655.10957	3044.407	0.582798917	582.798917
GAS	12659.83	361611.9115	188612.6	37.41734688	37417.34688
DSL	9921.278	348378.0049	124797.2	19.62382021	19623.82021
GAS	2111.012	75872.95291	31450.94	8.557437921	8557.437921
DSL	4130.616	161656.3382	51957.96	10.0953777	10095.3777
GAS	34946.84	253873.3441	69886.7	6.747023417	6747.023417
GAS	158291.2	5000618.841	982563.1	293.0884672	293088.4672
DSL	2801.694	104056.9965	17960.63	4.454441301	4454.441301
GAS	3472.241	28453.68454	347.363	4.274327546	4274.327546
DSL	898.6704	7782.571992	89.86704	0.804684827	804.684827
GAS	1521.894	76131.76679	30450.05	11.78412817	11784.12817
DSL	10000.12	516216.2745	0	62.09210153	62092.10153
GAS	830.7835	45141.34177	16622.32	6.840142405	6840.142405
DSL	706.3618	55513.68128	0	7.690304694	7690.304694
GAS	234.6476	10619.66719	938.5905	0.918103075	918.103075
DSL	499.4671	19014.63622	0	2.626608734	2626.608734
GAS	172.5886	23181.24304	690.3543	4.574992297	4574.992297
DSL	378.0783	50781.60771	1512.313	11.71967452	11719.67452

mi/gal	CO2_RUNEX (tons/day)	CO2 (lb/day)	% of vehicle class EMFAC
4.735289209	18.32898331	36,658	0.009844873
5.823933331	1762.837316	3,525,675	0.990155127
30.74127614	8035.674102	16,071,348	0.95256085
39.74547493	85.93417687	171,868	0.010625299
#DIV/0!	0	0	0.036813851
25.8196516	614.0270822	1,228,054	0.998600469
29.57385006	0.494752414	990	0.000739176
#DIV/0!	0	0	0.000660356
22.76281481	3442.335141	6,884,670	0.997983874
30.29365542	6.475543526	12,951	0.002016126
9.664285194	334.9336241	669,867	0.509319785
17.75281271	216.5481313	433,096	0.490680215
8.866316485	77.40884702	154,818	0.31942567
16.0129064	111.1846237	222,369	0.68057433
37.62745857	47.21959228	94,439	1
17.06180693	2615.14387	5,230,288	0.979615357
23.3602801	49.49379224	98,988	0.020384643
6.656879762	39.91887212	79,838	0.785226932
9.671577903	8.940942521	17,882	0.214773068
6.460534516	104.9546415	209,909	0.128525396
8.313718842	682.5081365	1,365,016	0.871474604
6.599473973	62.27290826	124,546	0.448475798
7.218658231	83.54953279	167,099	0.551524202
11.56696615	7.721181255	15,442	0.35835724
7.239234369	27.12066714	54,241	0.64164276
5.066946901	42.47354131	84,947	0.313417382
4.333022015	130.2186057	260,437	0.686582618

% vehicle class CalEEMod	% vehicle class project	VMT by project vehicle class (mi/yr)
0.026318	0.000259097	771
0.026318	0.026058903	77,519
0.578893	0.551430808	1,640,369
0.578893	0.006150911	18,297
0.578893	0.021311281	63,396
0.033999	0.033951417	100,997
0.033999	2.51312E-05	75
0.033999	2.24514E-05	67
0.21284	0.212410888	631,869
0.21284	0.000429112	1,277
0.010628	0.005413051	16,102
0.010628	0.005214949	15,513
0.004325	0.001381516	4,110
0.004325	0.002943484	8,756
0.005392	0.005392	16,040
0.104491	0.102360988	304,498
0.104491	0.002130012	6,336
0.000566	0.000444438	1,322
0.000566	0.000121562	362
0.018736	0.002408052	7,163
0.018736	0.016327948	48,572
0.001852	0.000830577	2,471
0.001852	0.001021423	3,038
0.000598	0.000214298	637
0.000598	0.000383702	1,141
0.001362	0.000426874	1,270
0.001362	0.000935126	2,782
		-

Gasoline Sum

Diesel Sum

Gallons of fuel

163
13,310
53,360
460
-
3,912
3
-
27,759
42
1,666
874
464
547
426
17,847
271
199
37
1,109
5,842
374
421
55
158
251
642

107,584
22,608

Daytime Construction Activities-Heavy Duty Equipment

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)	Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet ¹	Usage Factor ¹
Threshold	194	75.0	Grader	85	0.4
Residence 1	400	66.0	Backhoe	80	0.4
Residence 2	450	64.6	Tractor	84	0.16
Residence 3	680	59.9	Scraper	85	0.4
			Dozer	85	0.4
			Concrete Mixer Truck	85	0.4
			Paver	85	0.4
			Roller	85	0.4
			Roller	85	0.2
			Front End Loader	80	0.4

Ground Type soft
 Source Height 8
 Receiver Height 5
 Ground Factor² 0.63

Predicted Noise Level ³	L_{eq} dBA at 50 feet ³
Grader	81.0
Backhoe	76.0
Tractor	76.0
Scraper	81.0
Dozer	81.0
Concrete Mixer Truck	81.0
Paver	81.0
Roller	81.0
Roller	78.0
Front End Loader	76.0

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

89.7

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).

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

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.

Daytime Construction Activities-Heavy Duty Equipment

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L _{eq} dBA)	Equipment	Reference Emission Noise Levels (L _{max}) at 50	Usage Factor ¹
				feet ¹	
Threshold	295	75.0	Grader	85	1
Residence 1	400	70.5	Backhoe	80	1
Residence 2	450	69.1	Tractor	84	1
Residence 3	680	64.4	Scraper	85	1
			Dozer	85	1
			Concrete Mixer Truck	85	1
			Paver	85	1
			Roller	85	1
			Roller	85	1
			Front End Loader	80	1

Ground Type soft
 Source Height 8
 Receiver Height 5
 Ground Factor² 0.63

Predicted Noise Level ³	L _{eq} dBA at 50 feet ³
Grader	85.0
Backhoe	80.0
Tractor	84.0
Scraper	85.0
Dozer	85.0
Concrete Mixer Truck	85.0
Paver	85.0
Roller	85.0
Roller	85.0
Front End Loader	80.0

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

94.3

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).

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

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.



Daytime Construction Activities-Heavy Duty Equipment

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L _{eq} dBA)	Equipment	Reference Emission Noise Levels (L _{max}) at 50 feet ¹	Usage Factor ¹
Threshold	95,273	0.0	Generator	82	1
Residence 1	0	#NUM!			
Residence 2	0	#NUM!			
Residence 3	0	#NUM!			

Ground Type soft
 Source Height 8
 Receiver Height 5
 Ground Factor² 0.63

Predicted Noise Level ³	L _{eq} dBA at 50 feet ³
Generator	82.0

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

82.0

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).

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

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.

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.

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

Noise Source/ID	Reference Noise Level		
	vibration level (VdB)	@	distance (ft)
large bull dozer	87	@	25

STEP 3A: Select the distance to the receiver.

Attenuated Noise Level at Receptor		
vibration level (VdB)	@	distance (ft)
79.9	@	43

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

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

Noise Source/ID	Reference Noise Level		
	vibration level (PPV)	@	distance (ft)
large bull dozer	0.089	@	25

STEP 3B: Select the distance to the receiver.

Attenuated Noise Level at Receptor		
vibration level (PPV)	@	distance (ft)
0.191	@	15

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.

Traffic Noise Spreadsheet Calculator



Project:	Input										Output						
	Noise Level Descriptor: Ldn Site Conditions: Soft Traffic Input: Peak Traffic K-Factor: 10	Peak Hour Volume	Speed (mph)	Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics					Ldn, (dBA) _{5,6,7}	Distance to Contour, (feet) ₃					
				Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve		% Night	70 dBA	65 dBA	60 dBA	55 dBA	
Existing Conditions																	
Existing Conditions on Monterey Road	1,595	50	116	84	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.7	44	95	204	439		
Existing + Project Conditions on Monterey Road	1,699	50	116	84	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.0	46	99	213	458		
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							
		35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%							</

Attenuation Calculations for Stationary Noise Sources

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: Identify the noise source and enter the reference noise level (dBA and distance).

STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.

STEP 3: Select the distance to the receiver.

Noise Source/ID	Reference Noise Level			Attenuation Characteristics				Attenuated Noise Level at Receptor		
	noise level (dBA)	@	distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	noise level (dBA)	@	distance (ft)
Generator	82.0	@	50	soft	5	5	0.58	60.2	@	350
Playground	75.0	@	100	soft	5	5	0.58	54.0	@	650
Generator	82.0	@	50	soft	5	5	0.58	58.7	@	400
Generator	82.0	@	50	soft	5	5	0.58	52.7	@	680

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 12-3 and 12-4 of FTA 2006.

Computation of the ground factor is based on the equation presented in Figure 6-23 on pg. 6-23 of FTA 2006, where the distance of the reference noise level can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

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	104
Number of buses per hour	0
Distance to sensitive receptor (feet)	90
Leq @ 50	52.6
Leq @ 90	47.5

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.