

Appendix F

Greenhouse Gas Emissions Modeling Results

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

HIP Expansion - San Antonio Road Corridor
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	818.00	Dwelling Unit	9.64	818,000.00	2339

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	5			Operational Year	2030
Utility Company	City of Palo Alto Public Utilities				
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CPAU has provided 100 percent carbon neutral electricity

Land Use - 9.64 acres in program area

Vehicle Trips - Rates per TJKM

Woodstoves - No woodstoves or wood burning fireplaces

Energy Use -

Mobile Land Use Mitigation -

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblLandUse	LotAcreage	21.53	9.64
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	354.26	0
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblVehicleTrips	ST_TR	6.39	5.44
tblVehicleTrips	SU_TR	5.86	5.44
tblVehicleTrips	WD_TR	6.65	5.44
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-3-2020	7-2-2020	1.1484	1.1484
2	7-3-2020	10-2-2020	1.1416	1.1416
3	10-3-2020	1-2-2021	1.1565	1.1565
4	1-3-2021	4-2-2021	1.0264	1.0264
5	4-3-2021	7-2-2021	6.2278	6.2278
		Highest	6.2278	6.2278

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	3.9533	0.0831	6.0633	4.1000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7500e-003	2.8000e-004	25.5665
Energy	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619
Mobile	0.6657	2.8748	7.6639	0.0330	3.8209	0.0221	3.8430	1.0225	0.0206	1.0431	0.0000	3,038.7369	3,038.7369	0.0874	0.0000	3,040.9219
Waste						0.0000	0.0000		0.0000	0.0000	76.3814	0.0000	76.3814	4.5140	0.0000	189.2318
Water						0.0000	0.0000		0.0000	0.0000	16.9084	0.0000	16.9084	1.7367	0.0410	72.5444
Total	4.6575	3.2869	13.8673	0.0355	3.8209	0.0835	3.9043	1.0225	0.0819	1.1045	93.2898	3,445.0733	3,538.3631	6.3551	0.0483	3,711.6264

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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	3.9533	0.0831	6.0633	4.1000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7500e-003	2.8000e-004	25.5665
Energy	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619
Mobile	0.5933	2.5161	5.9189	0.0239	2.6746	0.0165	2.6911	0.7158	0.0154	0.7311	0.0000	2,197.4766	2,197.4766	0.0673	0.0000	2,199.1595
Waste						0.0000	0.0000		0.0000	0.0000	76.3814	0.0000	76.3814	4.5140	0.0000	189.2318
Water						0.0000	0.0000		0.0000	0.0000	16.9084	0.0000	16.9084	1.7367	0.0410	72.5444
Total	4.5851	2.9282	12.1222	0.0264	2.6746	0.0779	2.7525	0.7158	0.0767	0.7925	93.2898	2,603.8129	2,697.1027	6.3350	0.0483	2,869.8640

	ROG	NOx	CO	SO2	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	1.56	10.91	12.58	25.75	30.00	6.71	29.50	30.00	6.37	28.25	0.00	24.42	23.78	0.32	0.00	22.68

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	Demolition	Demolition	4/3/2020	4/30/2020	5	20	
2	Site Preparation	Site Preparation	5/1/2020	5/14/2020	5	10	
3	Grading	Grading	5/15/2020	6/11/2020	5	20	
4	Building Construction	Building Construction	6/12/2020	4/29/2021	5	230	
5	Paving	Paving	4/30/2021	5/27/2021	5	20	
6	Architectural Coating	Architectural Coating	5/28/2021	6/24/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 1,656,450; Residential Outdoor: 552,150; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	589.00	87.00	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	118.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209
Total	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209
Total	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.2500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6121	0.6121	2.0000e-005	0.0000	0.6125
Total	3.0000e-004	2.1000e-004	2.2500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6121	0.6121	2.0000e-005	0.0000	0.6125

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.2500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6121	0.6121	2.0000e-005	0.0000	0.6125
Total	3.0000e-004	2.1000e-004	2.2500e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6121	0.6121	2.0000e-005	0.0000	0.6125

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0655	0.0127	0.0783	0.0337	0.0117	0.0454	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209
Total	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0655	0.0127	0.0783	0.0337	0.0117	0.0454	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209
Total	5.0000e-004	3.6000e-004	3.7500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0202	1.0202	3.0000e-005	0.0000	1.0209

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9172	167.9172	0.0410	0.0000	168.9414
Total	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9172	167.9172	0.0410	0.0000	168.9414

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0250	0.7182	0.1913	1.7200e-003	0.0415	3.5600e-003	0.0451	0.0120	3.4000e-003	0.0154	0.0000	164.9050	164.9050	7.5600e-003	0.0000	165.0941
Worker	0.1418	0.1019	1.0687	3.2100e-003	0.3387	2.1900e-003	0.3409	0.0901	2.0200e-003	0.0921	0.0000	290.4408	290.4408	7.1200e-003	0.0000	290.6189
Total	0.1668	0.8201	1.2600	4.9300e-003	0.3802	5.7500e-003	0.3859	0.1021	5.4200e-003	0.1075	0.0000	455.3459	455.3459	0.0147	0.0000	455.7130

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	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9170	167.9170	0.0410	0.0000	168.9412
Total	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9170	167.9170	0.0410	0.0000	168.9412

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0250	0.7182	0.1913	1.7200e-003	0.0415	3.5600e-003	0.0451	0.0120	3.4000e-003	0.0154	0.0000	164.9050	164.9050	7.5600e-003	0.0000	165.0941
Worker	0.1418	0.1019	1.0687	3.2100e-003	0.3387	2.1900e-003	0.3409	0.0901	2.0200e-003	0.0921	0.0000	290.4408	290.4408	7.1200e-003	0.0000	290.6189
Total	0.1668	0.8201	1.2600	4.9300e-003	0.3802	5.7500e-003	0.3859	0.1021	5.4200e-003	0.1075	0.0000	455.3459	455.3459	0.0147	0.0000	455.7130

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0808	0.7409	0.7045	1.1400e-003		0.0407	0.0407		0.0383	0.0383	0.0000	98.4458	98.4458	0.0238	0.0000	99.0396
Total	0.0808	0.7409	0.7045	1.1400e-003		0.0407	0.0407		0.0383	0.0383	0.0000	98.4458	98.4458	0.0238	0.0000	99.0396

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0121	0.3800	0.1011	1.0000e-003	0.0243	8.4000e-004	0.0252	7.0300e-003	8.1000e-004	7.8400e-003	0.0000	95.7761	95.7761	4.1700e-003	0.0000	95.8805
Worker	0.0771	0.0534	0.5726	1.8200e-003	0.1985	1.2500e-003	0.1998	0.0528	1.1500e-003	0.0540	0.0000	164.3488	164.3488	3.7400e-003	0.0000	164.4423
Total	0.0892	0.4334	0.6738	2.8200e-003	0.2229	2.0900e-003	0.2250	0.0598	1.9600e-003	0.0618	0.0000	260.1250	260.1250	7.9100e-003	0.0000	260.3227

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	0.0808	0.7409	0.7044	1.1400e-003		0.0407	0.0407		0.0383	0.0383	0.0000	98.4457	98.4457	0.0238	0.0000	99.0395
Total	0.0808	0.7409	0.7044	1.1400e-003		0.0407	0.0407		0.0383	0.0383	0.0000	98.4457	98.4457	0.0238	0.0000	99.0395

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0121	0.3800	0.1011	1.0000e-003	0.0243	8.4000e-004	0.0252	7.0300e-003	8.1000e-004	7.8400e-003	0.0000	95.7761	95.7761	4.1700e-003	0.0000	95.8805
Worker	0.0771	0.0534	0.5726	1.8200e-003	0.1985	1.2500e-003	0.1998	0.0528	1.1500e-003	0.0540	0.0000	164.3488	164.3488	3.7400e-003	0.0000	164.4423
Total	0.0892	0.4334	0.6738	2.8200e-003	0.2229	2.0900e-003	0.2250	0.0598	1.9600e-003	0.0618	0.0000	260.1250	260.1250	7.9100e-003	0.0000	260.3227

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854

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	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854
Total	4.6000e-004	3.2000e-004	3.4300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9848	0.9848	2.0000e-005	0.0000	0.9854

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	5.7582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	5.7604	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.5200e-003	0.0270	9.0000e-005	9.3600e-003	6.0000e-005	9.4200e-003	2.4900e-003	5.0000e-005	2.5400e-003	0.0000	7.7472	7.7472	1.8000e-004	0.0000	7.7516
Total	3.6400e-003	2.5200e-003	0.0270	9.0000e-005	9.3600e-003	6.0000e-005	9.4200e-003	2.4900e-003	5.0000e-005	2.5400e-003	0.0000	7.7472	7.7472	1.8000e-004	0.0000	7.7516

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	5.7582					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	5.7604	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.5200e-003	0.0270	9.0000e-005	9.3600e-003	6.0000e-005	9.4200e-003	2.4900e-003	5.0000e-005	2.5400e-003	0.0000	7.7472	7.7472	1.8000e-004	0.0000	7.7516
Total	3.6400e-003	2.5200e-003	0.0270	9.0000e-005	9.3600e-003	6.0000e-005	9.4200e-003	2.4900e-003	5.0000e-005	2.5400e-003	0.0000	7.7472	7.7472	1.8000e-004	0.0000	7.7516

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	0.5933	2.5161	5.9189	0.0239	2.6746	0.0165	2.6911	0.7158	0.0154	0.7311	0.0000	2,197.4766	2,197.4766	0.0673	0.0000	2,199.1595
Unmitigated	0.6657	2.8748	7.6639	0.0330	3.8209	0.0221	3.8430	1.0225	0.0206	1.0431	0.0000	3,038.7369	3,038.7369	0.0874	0.0000	3,040.9219

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	4,449.92	4,449.92	4,449.92	10,277,568	7,194,297
Total	4,449.92	4,449.92	4,449.92	10,277,568	7,194,297

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
Apartments Mid Rise	10.80	4.80	5.70	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
Apartments Mid Rise	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651

5.0 Energy Detail

Historical Energy Use: N

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619
NaturalGas Unmitigated	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619

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					
Apartments Mid Rise	7.14149e+006	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619
Total		0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	7.14149e+006	0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619
Total		0.0385	0.3291	0.1400	2.1000e-003		0.0266	0.0266		0.0266	0.0266	0.0000	381.0972	381.0972	7.3000e-003	6.9900e-003	383.3619

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.45359e+006	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.45359e+006	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive 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	3.9533	0.0831	6.0633	4.1000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7500e-003	2.8000e-004	25.5665
Unmitigated	3.9533	0.0831	6.0633	4.1000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7500e-003	2.8000e-004	25.5665

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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	0.5758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5500e-003	0.0132	5.6300e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3178	15.3178	2.9000e-004	2.8000e-004	15.4088
Landscaping	0.1812	0.0698	6.0577	3.2000e-004		0.0337	0.0337		0.0337	0.0337	0.0000	9.9214	9.9214	9.4500e-003	0.0000	10.1577
Total	3.9533	0.0831	6.0633	4.0000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7400e-003	2.8000e-004	25.5665

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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	0.5758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5500e-003	0.0132	5.6300e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3178	15.3178	2.9000e-004	2.8000e-004	15.4088
Landscaping	0.1812	0.0698	6.0577	3.2000e-004		0.0337	0.0337		0.0337	0.0337	0.0000	9.9214	9.9214	9.4500e-003	0.0000	10.1577
Total	3.9533	0.0831	6.0633	4.0000e-004		0.0348	0.0348		0.0348	0.0348	0.0000	25.2391	25.2391	9.7400e-003	2.8000e-004	25.5665

7.0 Water Detail

7.1 Mitigation Measures Water

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.9084	1.7367	0.0410	72.5444
Unmitigated	16.9084	1.7367	0.0410	72.5444

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	53.296 / 33.5996	16.9084	1.7367	0.0410	72.5444
Total		16.9084	1.7367	0.0410	72.5444

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	53.296 / 33.5996	16.9084	1.7367	0.0410	72.5444
Total		16.9084	1.7367	0.0410	72.5444

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	76.3814	4.5140	0.0000	189.2318
Unmitigated	76.3814	4.5140	0.0000	189.2318

HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	376.28	76.3814	4.5140	0.0000	189.2318
Total		76.3814	4.5140	0.0000	189.2318

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	376.28	76.3814	4.5140	0.0000	189.2318
Total		76.3814	4.5140	0.0000	189.2318

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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HIP Expansion - San Antonio Road Corridor - Santa Clara County, Annual

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

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

788 San Antonio Road Mixed-Use Project
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	126.00	Space	0.00	59,000.00	0
Apartments Mid Rise	102.00	Dwelling Unit	0.67	83,466.00	235
Regional Shopping Center	1.78	1000sqft	0.04	1,779.50	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2030
Utility Company	City of Palo Alto Public Utilities				
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

Project Characteristics - Adjusted CPAU has provided 100 percent carbon neutral electricity

Land Use - Changed from default based on proj info.

Construction Phase - Changed due to client information.

Demolition -

Grading - CY material provided by client.

Vehicle Trips - Trip gen rates changed to match traffic study and include reductions.

Woodstoves - No woodstoves or wood burning fireplaces.

Energy Use - Reduced by 30% per 2019 requirements.

Water And Wastewater - Reduced by 20 percent per 2019 requirements.

Solid Waste - Additional 25% diversion rate based on AB 341.

Construction Off-road Equipment Mitigation - Per BAAQMD requirements.

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Project info

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	1.00	6.00
tblConstructionPhase	NumDays	2.00	45.00
tblConstructionPhase	NumDays	100.00	379.00
tblConstructionPhase	NumDays	5.00	31.00
tblConstructionPhase	NumDays	5.00	25.00
tblEnergyUse	T24E	2.24	1.57
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberWood	17.34	0.00
tblGrading	AcresOfGrading	3.00	0.50

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

tblLandUse	LandUseSquareFeet	50,400.00	59,000.00
tblLandUse	LandUseSquareFeet	102,000.00	83,466.00
tblLandUse	LandUseSquareFeet	1,780.00	1,779.50
tblLandUse	LotAcreage	1.13	0.00
tblLandUse	LotAcreage	2.68	0.67
tblLandUse	Population	292.00	235.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	354.26	0
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblSolidWaste	SolidWasteGenerationRate	46.92	35.19
tblSolidWaste	SolidWasteGenerationRate	1.87	1.40
tblTripsAndVMT	HaulingTripNumber	0.00	2,521.00
tblVehicleTrips	ST_TR	6.39	4.34
tblVehicleTrips	ST_TR	49.97	563.26
tblVehicleTrips	SU_TR	5.86	3.98
tblVehicleTrips	SU_TR	25.24	284.67
tblVehicleTrips	WD_TR	6.65	4.52
tblVehicleTrips	WD_TR	42.70	481.60
tblWater	IndoorWaterUseRate	6,645,710.61	5,316,568.49
tblWater	IndoorWaterUseRate	131,849.09	105,479.27

2.0 Emissions Summary

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0328	0.4142	0.2730	8.3000e-004	0.0375	0.0151	0.0525	0.0107	0.0144	0.0250	0.0000	76.7587	76.7587	8.7400e-003	0.0000	76.9773
2021	0.1512	1.5177	1.3224	3.6100e-003	0.1380	0.0597	0.1977	0.0400	0.0551	0.0951	0.0000	330.3619	330.3619	0.0483	0.0000	331.5693
2022	0.6967	0.7704	0.8309	1.9700e-003	0.0709	0.0326	0.1036	0.0191	0.0302	0.0493	0.0000	177.0386	177.0386	0.0301	0.0000	177.7899
Maximum	0.6967	1.5177	1.3224	3.6100e-003	0.1380	0.0597	0.1977	0.0400	0.0551	0.0951	0.0000	330.3619	330.3619	0.0483	0.0000	331.5693

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0328	0.4142	0.2730	8.3000e-004	0.0285	0.0151	0.0436	7.8400e-003	0.0144	0.0222	0.0000	76.7587	76.7587	8.7400e-003	0.0000	76.9773
2021	0.1512	1.5177	1.3224	3.6100e-003	0.1324	0.0597	0.1921	0.0369	0.0551	0.0920	0.0000	330.3617	330.3617	0.0483	0.0000	331.5691
2022	0.6967	0.7704	0.8309	1.9700e-003	0.0709	0.0326	0.1036	0.0191	0.0302	0.0493	0.0000	177.0385	177.0385	0.0301	0.0000	177.7898
Maximum	0.6967	1.5177	1.3224	3.6100e-003	0.1324	0.0597	0.1921	0.0369	0.0551	0.0920	0.0000	330.3617	330.3617	0.0483	0.0000	331.5691

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	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	5.90	0.00	4.11	8.48	0.00	3.48	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2020	12-31-2020	0.4355	0.4355
2	1-1-2021	3-31-2021	0.5415	0.5415
3	4-1-2021	6-30-2021	0.3737	0.3737
4	7-1-2021	9-30-2021	0.3778	0.3778
5	10-1-2021	12-31-2021	0.3806	0.3806
6	1-1-2022	3-31-2022	0.3333	0.3333
7	4-1-2022	6-30-2022	0.6421	0.6421
8	7-1-2022	9-30-2022	0.4814	0.4814
		Highest	0.6421	0.6421

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6600e-003	4.0000e-005	4.9672
Energy	4.8500e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425
Mobile	0.1923	0.9938	2.0068	8.8000e-003	0.9268	5.9100e-003	0.9328	0.2486	5.5000e-003	0.2541	0.0000	812.4972	812.4972	0.0266	0.0000	813.1619
Waste						0.0000	0.0000		0.0000	0.0000	7.4274	0.0000	7.4274	0.4390	0.0000	18.4012
Water						0.0000	0.0000		0.0000	0.0000	1.7202	0.0000	1.7202	0.1767	4.1700e-003	7.3803
Total	0.6257	1.0468	2.8547	9.3500e-003	0.9268	0.0255	0.9523	0.2486	0.0251	0.2737	10.7385	863.6042	874.3426	0.6518	5.0900e-003	892.1531

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6600e-003	4.0000e-005	4.9672
Energy	4.8500e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425
Mobile	0.1650	0.8469	1.4101	5.5000e-003	0.5436	3.8800e-003	0.5475	0.1458	3.6100e-003	0.1494	0.0000	508.9446	508.9446	0.0189	0.0000	509.4171
Waste						0.0000	0.0000		0.0000	0.0000	7.4274	0.0000	7.4274	0.4390	0.0000	18.4012
Water						0.0000	0.0000		0.0000	0.0000	1.7202	0.0000	1.7202	0.1767	4.1700e-003	7.3803
Total	0.5984	0.8999	2.2580	6.0500e-003	0.5436	0.0235	0.5671	0.1458	0.0232	0.1690	10.7385	560.0516	570.7901	0.6441	5.0900e-003	588.4083

	ROG	NOx	CO	SO2	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	4.36	14.04	20.90	35.29	41.35	7.97	40.46	41.35	7.54	38.25	0.00	35.15	34.72	1.18	0.00	34.05

3.0 Construction Detail

Construction Phase

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2020	11/25/2020	5	40	
2	Site Preparation	Site Preparation	11/30/2020	12/7/2020	5	6	
3	Grading	Grading	12/8/2020	2/8/2021	5	45	
4	Building Construction	Building Construction	2/9/2021	7/22/2022	5	379	
5	Architectural Coating	Architectural Coating	6/10/2022	7/22/2022	5	31	
6	Paving	Paving	7/25/2022	8/26/2022	5	25	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 169,019; Residential Outdoor: 56,340; Non-Residential Indoor: 2,669; Non-Residential Outdoor: 890; Striped Parking Area: 3,540 (Architectural Coating – sqft)

OffRoad Equipment

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	85.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,521.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	99.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.2000e-003	0.0000	9.2000e-003	1.3900e-003	0.0000	1.3900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1575	0.1525	2.4000e-004		9.3400e-003	9.3400e-003		8.9100e-003	8.9100e-003	0.0000	20.8151	20.8151	3.9400e-003	0.0000	20.9135
Total	0.0174	0.1575	0.1525	2.4000e-004	9.2000e-003	9.3400e-003	0.0185	1.3900e-003	8.9100e-003	0.0103	0.0000	20.8151	20.8151	3.9400e-003	0.0000	20.9135

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0124	2.5000e-003	3.0000e-005	7.2000e-004	4.0000e-005	7.6000e-004	2.0000e-004	4.0000e-005	2.4000e-004	0.0000	3.2571	3.2571	1.7000e-004	0.0000	3.2613
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	6.6000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3846	1.3846	3.0000e-005	0.0000	1.3854
Total	1.0100e-003	0.0129	7.4100e-003	5.0000e-005	2.3000e-003	5.0000e-005	2.3500e-003	6.2000e-004	5.0000e-005	6.7000e-004	0.0000	4.6417	4.6417	2.0000e-004	0.0000	4.6467

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					4.1400e-003	0.0000	4.1400e-003	6.3000e-004	0.0000	6.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1575	0.1525	2.4000e-004		9.3400e-003	9.3400e-003		8.9100e-003	8.9100e-003	0.0000	20.8151	20.8151	3.9400e-003	0.0000	20.9135
Total	0.0174	0.1575	0.1525	2.4000e-004	4.1400e-003	9.3400e-003	0.0135	6.3000e-004	8.9100e-003	9.5400e-003	0.0000	20.8151	20.8151	3.9400e-003	0.0000	20.9135

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0124	2.5000e-003	3.0000e-005	7.2000e-004	4.0000e-005	7.6000e-004	2.0000e-004	4.0000e-005	2.4000e-004	0.0000	3.2571	3.2571	1.7000e-004	0.0000	3.2613
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	6.6000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3846	1.3846	3.0000e-005	0.0000	1.3854
Total	1.0100e-003	0.0129	7.4100e-003	5.0000e-005	2.3000e-003	5.0000e-005	2.3500e-003	6.2000e-004	5.0000e-005	6.7000e-004	0.0000	4.6417	4.6417	2.0000e-004	0.0000	4.6467

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-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	2.0600e-003	0.0253	0.0123	3.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	2.5678	2.5678	8.3000e-004	0.0000	2.5885
Total	2.0600e-003	0.0253	0.0123	3.0000e-005	2.7000e-004	1.0100e-003	1.2800e-003	3.0000e-005	9.3000e-004	9.6000e-004	0.0000	2.5678	2.5678	8.3000e-004	0.0000	2.5885

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1038	0.1038	0.0000	0.0000	0.1039
Total	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1038	0.1038	0.0000	0.0000	0.1039

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	0.0253	0.0123	3.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	2.5678	2.5678	8.3000e-004	0.0000	2.5885
Total	2.0600e-003	0.0253	0.0123	3.0000e-005	1.2000e-004	1.0100e-003	1.1300e-003	1.0000e-005	9.3000e-004	9.4000e-004	0.0000	2.5678	2.5678	8.3000e-004	0.0000	2.5885

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1038	0.1038	0.0000	0.0000	0.1039
Total	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1038	0.1038	0.0000	0.0000	0.1039

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7700e-003	0.0000	6.7700e-003	3.7200e-003	0.0000	3.7200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8100e-003	0.0709	0.0686	1.1000e-004		4.2000e-003	4.2000e-003		4.0100e-003	4.0100e-003	0.0000	9.3668	9.3668	1.7700e-003	0.0000	9.4111
Total	7.8100e-003	0.0709	0.0686	1.1000e-004	6.7700e-003	4.2000e-003	0.0110	3.7200e-003	4.0100e-003	7.7300e-003	0.0000	9.3668	9.3668	1.7700e-003	0.0000	9.4111

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2100e-003	0.1474	0.0296	4.0000e-004	0.0181	4.8000e-004	0.0186	4.6900e-003	4.5000e-004	5.1400e-003	0.0000	38.6405	38.6405	1.9900e-003	0.0000	38.6903
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.2100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6231	0.6231	2.0000e-005	0.0000	0.6234
Total	4.5100e-003	0.1476	0.0318	4.1000e-004	0.0188	4.8000e-004	0.0193	4.8800e-003	4.5000e-004	5.3300e-003	0.0000	39.2636	39.2636	2.0100e-003	0.0000	39.3137

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					3.0500e-003	0.0000	3.0500e-003	1.6800e-003	0.0000	1.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8100e-003	0.0709	0.0686	1.1000e-004		4.2000e-003	4.2000e-003		4.0100e-003	4.0100e-003	0.0000	9.3668	9.3668	1.7700e-003	0.0000	9.4111
Total	7.8100e-003	0.0709	0.0686	1.1000e-004	3.0500e-003	4.2000e-003	7.2500e-003	1.6800e-003	4.0100e-003	5.6900e-003	0.0000	9.3668	9.3668	1.7700e-003	0.0000	9.4111

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2100e-003	0.1474	0.0296	4.0000e-004	0.0181	4.8000e-004	0.0186	4.6900e-003	4.5000e-004	5.1400e-003	0.0000	38.6405	38.6405	1.9900e-003	0.0000	38.6903
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.2100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6231	0.6231	2.0000e-005	0.0000	0.6234
Total	4.5100e-003	0.1476	0.0318	4.1000e-004	0.0188	4.8000e-004	0.0193	4.8800e-003	4.5000e-004	5.3300e-003	0.0000	39.2636	39.2636	2.0100e-003	0.0000	39.3137

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	5.5900e-003	0.0000	5.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.0979	0.1022	1.6000e-004		5.5000e-003	5.5000e-003		5.2500e-003	5.2500e-003	0.0000	14.0526	14.0526	2.6200e-003	0.0000	14.1181
Total	0.0108	0.0979	0.1022	1.6000e-004	0.0102	5.5000e-003	0.0157	5.5900e-003	5.2500e-003	0.0108	0.0000	14.0526	14.0526	2.6200e-003	0.0000	14.1181

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.2041	0.0435	5.9000e-004	0.0192	6.3000e-004	0.0198	5.0800e-003	6.0000e-004	5.6800e-003	0.0000	57.2174	57.2174	2.9200e-003	0.0000	57.2904
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.9000e-004	3.0300e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9018	0.9018	2.0000e-005	0.0000	0.9023
Total	6.3700e-003	0.2044	0.0465	6.0000e-004	0.0202	6.4000e-004	0.0209	5.3600e-003	6.1000e-004	5.9700e-003	0.0000	58.1192	58.1192	2.9400e-003	0.0000	58.1926

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					4.5700e-003	0.0000	4.5700e-003	2.5100e-003	0.0000	2.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.0979	0.1022	1.6000e-004		5.5000e-003	5.5000e-003		5.2500e-003	5.2500e-003	0.0000	14.0526	14.0526	2.6200e-003	0.0000	14.1181
Total	0.0108	0.0979	0.1022	1.6000e-004	4.5700e-003	5.5000e-003	0.0101	2.5100e-003	5.2500e-003	7.7600e-003	0.0000	14.0526	14.0526	2.6200e-003	0.0000	14.1181

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.2041	0.0435	5.9000e-004	0.0192	6.3000e-004	0.0198	5.0800e-003	6.0000e-004	5.6800e-003	0.0000	57.2174	57.2174	2.9200e-003	0.0000	57.2904
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.9000e-004	3.0300e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9018	0.9018	2.0000e-005	0.0000	0.9023
Total	6.3700e-003	0.2044	0.0465	6.0000e-004	0.0202	6.4000e-004	0.0209	5.3600e-003	6.1000e-004	5.9700e-003	0.0000	58.1192	58.1192	2.9400e-003	0.0000	58.1926

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0907	0.9342	0.8499	1.3300e-003		0.0524	0.0524		0.0482	0.0482	0.0000	117.0960	117.0960	0.0379	0.0000	118.0428
Total	0.0907	0.9342	0.8499	1.3300e-003		0.0524	0.0524		0.0482	0.0482	0.0000	117.0960	117.0960	0.0379	0.0000	118.0428

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8000e-003	0.2566	0.0641	6.6000e-004	0.0161	5.6000e-004	0.0167	4.6600e-003	5.3000e-004	5.1900e-003	0.0000	63.7208	63.7208	3.1300e-003	0.0000	63.7991
Worker	0.0356	0.0245	0.2598	8.6000e-004	0.0915	6.0000e-004	0.0921	0.0244	5.5000e-004	0.0249	0.0000	77.3733	77.3733	1.7300e-003	0.0000	77.4167
Total	0.0434	0.2812	0.3239	1.5200e-003	0.1076	1.1600e-003	0.1088	0.0290	1.0800e-003	0.0301	0.0000	141.0941	141.0941	4.8600e-003	0.0000	141.2158

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	0.0907	0.9342	0.8499	1.3300e-003		0.0524	0.0524		0.0482	0.0482	0.0000	117.0959	117.0959	0.0379	0.0000	118.0426
Total	0.0907	0.9342	0.8499	1.3300e-003		0.0524	0.0524		0.0482	0.0482	0.0000	117.0959	117.0959	0.0379	0.0000	118.0426

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8000e-003	0.2566	0.0641	6.6000e-004	0.0161	5.6000e-004	0.0167	4.6600e-003	5.3000e-004	5.1900e-003	0.0000	63.7208	63.7208	3.1300e-003	0.0000	63.7991
Worker	0.0356	0.0245	0.2598	8.6000e-004	0.0915	6.0000e-004	0.0921	0.0244	5.5000e-004	0.0249	0.0000	77.3733	77.3733	1.7300e-003	0.0000	77.4167
Total	0.0434	0.2812	0.3239	1.5200e-003	0.1076	1.1600e-003	0.1088	0.0290	1.0800e-003	0.0301	0.0000	141.0941	141.0941	4.8600e-003	0.0000	141.2158

3.5 Building Construction - 2022

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	0.0498	0.5094	0.5186	8.3000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	72.6071	72.6071	0.0235	0.0000	73.1941
Total	0.0498	0.5094	0.5186	8.3000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	72.6071	72.6071	0.0235	0.0000	73.1941

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.5 Building Construction - 2022

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	4.5100e-003	0.1506	0.0373	4.1000e-004	9.9800e-003	3.0000e-004	0.0103	2.8900e-003	2.9000e-004	3.1700e-003	0.0000	39.0980	39.0980	1.8600e-003	0.0000	39.1443
Worker	0.0205	0.0136	0.1479	5.1000e-004	0.0567	3.6000e-004	0.0571	0.0151	3.3000e-004	0.0154	0.0000	46.1873	46.1873	9.6000e-004	0.0000	46.2114
Total	0.0250	0.1642	0.1853	9.2000e-004	0.0667	6.6000e-004	0.0674	0.0180	6.2000e-004	0.0186	0.0000	85.2852	85.2852	2.8200e-003	0.0000	85.3557

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	0.0498	0.5094	0.5186	8.3000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	72.6070	72.6070	0.0235	0.0000	73.1941
Total	0.0498	0.5094	0.5186	8.3000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	72.6070	72.6070	0.0235	0.0000	73.1941

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.5 Building Construction - 2022

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	4.5100e-003	0.1506	0.0373	4.1000e-004	9.9800e-003	3.0000e-004	0.0103	2.8900e-003	2.9000e-004	3.1700e-003	0.0000	39.0980	39.0980	1.8600e-003	0.0000	39.1443
Worker	0.0205	0.0136	0.1479	5.1000e-004	0.0567	3.6000e-004	0.0571	0.0151	3.3000e-004	0.0154	0.0000	46.1873	46.1873	9.6000e-004	0.0000	46.2114
Total	0.0250	0.1642	0.1853	9.2000e-004	0.0667	6.6000e-004	0.0674	0.0180	6.2000e-004	0.0186	0.0000	85.2852	85.2852	2.8200e-003	0.0000	85.3557

3.6 Architectural Coating - 2022

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	0.6091					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1700e-003	0.0218	0.0281	5.0000e-005		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	3.9575	3.9575	2.6000e-004	0.0000	3.9640
Total	0.6123	0.0218	0.0281	5.0000e-005		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	3.9575	3.9575	2.6000e-004	0.0000	3.9640

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.6 Architectural Coating - 2022

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	8.9000e-004	5.9000e-004	6.3900e-003	2.0000e-005	2.4500e-003	2.0000e-005	2.4700e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9949	1.9949	4.0000e-005	0.0000	1.9959
Total	8.9000e-004	5.9000e-004	6.3900e-003	2.0000e-005	2.4500e-003	2.0000e-005	2.4700e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9949	1.9949	4.0000e-005	0.0000	1.9959

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	0.6091					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1700e-003	0.0218	0.0281	5.0000e-005		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	3.9575	3.9575	2.6000e-004	0.0000	3.9640
Total	0.6123	0.0218	0.0281	5.0000e-005		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	3.9575	3.9575	2.6000e-004	0.0000	3.9640

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.6 Architectural Coating - 2022

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	8.9000e-004	5.9000e-004	6.3900e-003	2.0000e-005	2.4500e-003	2.0000e-005	2.4700e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9949	1.9949	4.0000e-005	0.0000	1.9959
Total	8.9000e-004	5.9000e-004	6.3900e-003	2.0000e-005	2.4500e-003	2.0000e-005	2.4700e-003	6.5000e-004	1.0000e-005	6.7000e-004	0.0000	1.9949	1.9949	4.0000e-005	0.0000	1.9959

3.7 Paving - 2022

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	8.0900e-003	0.0740	0.0879	1.4000e-004		3.7000e-003	3.7000e-003		3.4500e-003	3.4500e-003	0.0000	11.7461	11.7461	3.4200e-003	0.0000	11.8316
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.0900e-003	0.0740	0.0879	1.4000e-004		3.7000e-003	3.7000e-003		3.4500e-003	3.4500e-003	0.0000	11.7461	11.7461	3.4200e-003	0.0000	11.8316

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.7 Paving - 2022

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	6.4000e-004	4.3000e-004	4.6400e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4479	1.4479	3.0000e-005	0.0000	1.4486
Total	6.4000e-004	4.3000e-004	4.6400e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4479	1.4479	3.0000e-005	0.0000	1.4486

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	8.0900e-003	0.0740	0.0879	1.4000e-004		3.7000e-003	3.7000e-003		3.4500e-003	3.4500e-003	0.0000	11.7460	11.7460	3.4200e-003	0.0000	11.8316
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.0900e-003	0.0740	0.0879	1.4000e-004		3.7000e-003	3.7000e-003		3.4500e-003	3.4500e-003	0.0000	11.7460	11.7460	3.4200e-003	0.0000	11.8316

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

3.7 Paving - 2022

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	6.4000e-004	4.3000e-004	4.6400e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4479	1.4479	3.0000e-005	0.0000	1.4486
Total	6.4000e-004	4.3000e-004	4.6400e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4479	1.4479	3.0000e-005	0.0000	1.4486

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Transit Accessibility

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	0.1650	0.8469	1.4101	5.5000e-003	0.5436	3.8800e-003	0.5475	0.1458	3.6100e-003	0.1494	0.0000	508.9446	508.9446	0.0189	0.0000	509.4171
Unmitigated	0.1923	0.9938	2.0068	8.8000e-003	0.9268	5.9100e-003	0.9328	0.2486	5.5000e-003	0.2541	0.0000	812.4972	812.4972	0.0266	0.0000	813.1619

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	461.04	442.68	405.96	1,040,590	610,308
Enclosed Parking with Elevator	0.00	0.00	0.00		
Regional Shopping Center	857.25	1,002.60	506.71	1,451,625	851,381
Total	1,318.29	1,445.28	912.67	2,492,215	1,461,689

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
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Enclosed Parking with Elevator	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Regional Shopping Center	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	4.8500e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425
NaturalGas Unmitigated	4.8500e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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					
Apartments Mid Rise	890504	4.8000e-003	0.0410	0.0175	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5207	47.5207	9.1000e-004	8.7000e-004	47.8031
Enclosed Parking with Elevator	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
Regional Shopping Center	8185.7	4.0000e-005	4.0000e-004	3.4000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4368	0.4368	1.0000e-005	1.0000e-005	0.4394
Total		4.8400e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425

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					
Apartments Mid Rise	890504	4.8000e-003	0.0410	0.0175	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	47.5207	47.5207	9.1000e-004	8.7000e-004	47.8031
Enclosed Parking with Elevator	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
Regional Shopping Center	8185.7	4.0000e-005	4.0000e-004	3.4000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4368	0.4368	1.0000e-005	1.0000e-005	0.4394
Total		4.8400e-003	0.0414	0.0178	2.6000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	47.9575	47.9575	9.2000e-004	8.8000e-004	48.2425

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	430643	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	345740	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	17456.9	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	430643	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	345740	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	17456.9	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6600e-003	4.0000e-005	4.9672
Unmitigated	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6600e-003	4.0000e-005	4.9672

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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	0.0609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3367					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.2100e-003	2.8400e-003	0.0735	2.5000e-004		0.0120	0.0120		0.0120	0.0120	1.5909	1.9100	3.5009	7.4700e-003	4.0000e-005	3.6982
Landscaping	0.0227	8.7200e-003	0.7565	4.0000e-005		4.2000e-003	4.2000e-003		4.2000e-003	4.2000e-003	0.0000	1.2394	1.2394	1.1800e-003	0.0000	1.2690
Total	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6500e-003	4.0000e-005	4.9672

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

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	0.0609					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3367					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.2100e-003	2.8400e-003	0.0735	2.5000e-004		0.0120	0.0120		0.0120	0.0120	1.5909	1.9100	3.5009	7.4700e-003	4.0000e-005	3.6982
Landscaping	0.0227	8.7200e-003	0.7565	4.0000e-005		4.2000e-003	4.2000e-003		4.2000e-003	4.2000e-003	0.0000	1.2394	1.2394	1.1800e-003	0.0000	1.2690
Total	0.4286	0.0116	0.8301	2.9000e-004		0.0162	0.0162		0.0162	0.0162	1.5909	3.1495	4.7403	8.6500e-003	4.0000e-005	4.9672

7.0 Water Detail

7.1 Mitigation Measures Water

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.7202	0.1767	4.1700e-003	7.3803
Unmitigated	1.7202	0.1767	4.1700e-003	7.3803

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.31657 / 4.18969	1.6867	0.1732	4.0900e-003	7.2367
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.105479 / 0.0808107	0.0335	3.4400e-003	8.0000e-005	0.1436
Total		1.7202	0.1767	4.1700e-003	7.3803

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.31657 / 4.18969	1.6867	0.1732	4.0900e-003	7.2367
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.105479 / 0.0808107	0.0335	3.4400e-003	8.0000e-005	0.1436
Total		1.7202	0.1767	4.1700e-003	7.3803

8.0 Waste Detail**8.1 Mitigation Measures Waste**

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4274	0.4390	0.0000	18.4012
Unmitigated	7.4274	0.4390	0.0000	18.4012

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	35.19	7.1433	0.4222	0.0000	17.6971
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.4	0.2842	0.0168	0.0000	0.7041
Total		7.4274	0.4389	0.0000	18.4012

788 San Antonio Road Mixed-Use Project - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	35.19	7.1433	0.4222	0.0000	17.6971
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.4	0.2842	0.0168	0.0000	0.7041
Total		7.4274	0.4389	0.0000	18.4012

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

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

San Antonio Mixed Use - Baseline
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	6.50	1000sqft	0.15	6,500.00	0
Unrefrigerated Warehouse-No Rail	6.10	1000sqft	0.14	6,100.00	0
Parking Lot	34.00	Space	0.55	23,958.00	0
Health Club	6.10	1000sqft	0.14	6,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2021
Utility Company	City of Palo Alto Public Utilities				
CO2 Intensity (lb/MW hr)	354.26	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

Project Characteristics - Baseline run - Operational Analysis only

Land Use - Site consists of 12,200 sf fitness studio and storage building (assumed each land use is half of building) and 6,500 sf construction/concrete company. Parking lot area adjusted to fit 0.98 ac site.

Construction Phase - OPERATIONAL ANALYSIS ONLY

Vehicle Trips - Existing uses generate 175 weekday trips (per trip generation for project). Trip gen rates adjusted proportionally to total 175 weekday trips. Sat/Sun trip rates adjusted proportionally as well.

Consumer Products -

Area Coating - Defaults used. Assumed compliance with BAAQMD Regulation 8, Rule 3 mandating 100 g/L and 150 g/L max VOC content for flat and nonflat coatings, respectively.

Energy Use - Buildings are existing structures of unknown age. No reductions to Title 24 energy use incorporated.

Construction Off-road Equipment Mitigation - OPERATIONAL ANALYSIS ONLY

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LandUseSquareFeet	13,600.00	23,958.00
tblLandUse	LotAcreage	0.31	0.55
tblVehicleTrips	ST_TR	1.32	0.90
tblVehicleTrips	ST_TR	20.87	14.24
tblVehicleTrips	ST_TR	1.68	1.15
tblVehicleTrips	SU_TR	0.68	0.46
tblVehicleTrips	SU_TR	26.73	18.24
tblVehicleTrips	SU_TR	1.68	1.15
tblVehicleTrips	WD_TR	6.97	4.76
tblVehicleTrips	WD_TR	32.93	22.47
tblVehicleTrips	WD_TR	1.68	1.15

2.0 Emissions Summary

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003
Energy	1.7300e-003	0.0157	0.0132	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	37.4630	37.4630	2.0000e-003	6.6000e-004	37.7091
Mobile	0.0396	0.1853	0.4201	1.3800e-003	0.1142	1.2900e-003	0.1155	0.0306	1.2100e-003	0.0319	0.0000	126.2680	126.2680	5.0000e-003	0.0000	126.3931
Waste						0.0000	0.0000		0.0000	0.0000	9.8572	0.0000	9.8572	0.5826	0.0000	24.4209
Water						0.0000	0.0000		0.0000	0.0000	1.0389	2.9715	4.0104	0.1069	2.5700e-003	7.4498
Total	0.1262	0.2010	0.4338	1.4700e-003	0.1142	2.4800e-003	0.1167	0.0306	2.4000e-003	0.0331	10.8961	166.7035	177.5996	0.6965	3.2300e-003	195.9739

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003
Energy	1.7300e-003	0.0157	0.0132	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	37.4630	37.4630	2.0000e-003	6.6000e-004	37.7091
Mobile	0.0396	0.1853	0.4201	1.3800e-003	0.1142	1.2900e-003	0.1155	0.0306	1.2100e-003	0.0319	0.0000	126.2680	126.2680	5.0000e-003	0.0000	126.3931
Waste						0.0000	0.0000		0.0000	0.0000	9.8572	0.0000	9.8572	0.5826	0.0000	24.4209
Water						0.0000	0.0000		0.0000	0.0000	1.0389	2.9715	4.0104	0.1069	2.5700e-003	7.4498
Total	0.1262	0.2010	0.4338	1.4700e-003	0.1142	2.4800e-003	0.1167	0.0306	2.4000e-003	0.0331	10.8961	166.7035	177.5996	0.6965	3.2300e-003	195.9739

	ROG	NOx	CO	SO2	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/27/2019	12/27/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; 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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

3.2 Demolition - 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					
Off-Road	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285
Total	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285

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	1.0000e-005	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0357	0.0357	0.0000	0.0000	0.0358
Total	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0357	0.0357	0.0000	0.0000	0.0358

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

3.2 Demolition - 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					
Off-Road	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285
Total	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285

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	1.0000e-005	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0357	0.0357	0.0000	0.0000	0.0358
Total	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0357	0.0357	0.0000	0.0000	0.0358

4.0 Operational Detail - Mobile

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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	0.0396	0.1853	0.4201	1.3800e-003	0.1142	1.2900e-003	0.1155	0.0306	1.2100e-003	0.0319	0.0000	126.2680	126.2680	5.0000e-003	0.0000	126.3931
Unmitigated	0.0396	0.1853	0.4201	1.3800e-003	0.1142	1.2900e-003	0.1155	0.0306	1.2100e-003	0.0319	0.0000	126.2680	126.2680	5.0000e-003	0.0000	126.3931

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	30.94	5.85	2.99	68,208	68,208
Health Club	137.07	86.86	111.26	218,047	218,047
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	7.02	7.02	7.02	20,480	20,480
Total	175.02	99.73	121.27	306,736	306,736

4.3 Trip Type Information

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Health Club	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Unrefrigerated Warehouse-No Rail	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	20.3691	20.3691	1.6700e-003	3.4000e-004	20.5136
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	20.3691	20.3691	1.6700e-003	3.4000e-004	20.5136
NaturalGas Mitigated	1.7300e-003	0.0157	0.0132	9.0000e-005			1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	17.0940	17.0940	3.3000e-004	3.1000e-004	17.1956
NaturalGas Unmitigated	1.7300e-003	0.0157	0.0132	9.0000e-005			1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	17.0940	17.0940	3.3000e-004	3.1000e-004	17.1956

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					
General Light Industry	160875	8.7000e-004	7.8900e-003	6.6200e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	8.5849	8.5849	1.6000e-004	1.6000e-004	8.6359	
Health Club	150975	8.1000e-004	7.4000e-003	6.2200e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	8.0566	8.0566	1.5000e-004	1.5000e-004	8.1045	
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	
Unrefrigerated Warehouse-No Rail	8479	5.0000e-005	4.2000e-004	3.5000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.4525	0.4525	1.0000e-005	1.0000e-005	0.4552	
Total		1.7300e-003	0.0157	0.0132	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	17.0940	17.0940	3.2000e-004	3.2000e-004	17.1956

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	160875	8.7000e-004	7.8900e-003	6.6200e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	8.5849	8.5849	1.6000e-004	1.6000e-004	8.6359
Health Club	150975	8.1000e-004	7.4000e-003	6.2200e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	8.0566	8.0566	1.5000e-004	1.5000e-004	8.1045
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
Unrefrigerated Warehouse-No Rail	8479	5.0000e-005	4.2000e-004	3.5000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4525	0.4525	1.0000e-005	1.0000e-005	0.4552
Total		1.7300e-003	0.0157	0.0132	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	17.0940	17.0940	3.2000e-004	3.2000e-004	17.1956

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	49140	7.8963	6.5000e-004	1.3000e-004	7.9523
Health Club	46116	7.4104	6.1000e-004	1.3000e-004	7.4629
Parking Lot	8385.3	1.3474	1.1000e-004	2.0000e-005	1.3570
Unrefrigerated Warehouse-No Rail	23119	3.7150	3.0000e-004	6.0000e-005	3.7413
Total		20.3691	1.6700e-003	3.4000e-004	20.5136

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	49140	7.8963	6.5000e-004	1.3000e-004	7.9523
Health Club	46116	7.4104	6.1000e-004	1.3000e-004	7.4629
Parking Lot	8385.3	1.3474	1.1000e-004	2.0000e-005	1.3570
Unrefrigerated Warehouse-No Rail	23119	3.7150	3.0000e-004	6.0000e-005	3.7413
Total		20.3691	1.6700e-003	3.4000e-004	20.5136

6.0 Area Detail**6.1 Mitigation Measures Area**

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003
Unmitigated	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0746					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003
Total	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

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	0.0103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0746					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003
Total	0.0849	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e-004	9.4000e-004	0.0000	0.0000	1.0000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.0104	0.1069	2.5700e-003	7.4498
Unmitigated	4.0104	0.1069	2.5700e-003	7.4498

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	1.50313 / 0	1.7838	0.0491	1.1800e-003	3.3622
Health Club	0.360773 / 0.221119	0.5525	0.0118	2.8000e-004	0.9322
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.41063 / 0	1.6741	0.0461	1.1100e-003	3.1553
Total		4.0104	0.1070	2.5700e-003	7.4498

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	1.50313 / 0	1.7838	0.0491	1.1800e-003	3.3622
Health Club	0.360773 / 0.221119	0.5525	0.0118	2.8000e-004	0.9322
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.41063 / 0	1.6741	0.0461	1.1100e-003	3.1553
Total		4.0104	0.1070	2.5700e-003	7.4498

8.0 Waste Detail

8.1 Mitigation Measures Waste

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.8572	0.5826	0.0000	24.4209
Unmitigated	9.8572	0.5826	0.0000	24.4209

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	8.06	1.6361	0.0967	0.0000	4.0534
Health Club	34.77	7.0580	0.4171	0.0000	17.4859
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.73	1.1631	0.0687	0.0000	2.8816
Total		9.8573	0.5826	0.0000	24.4209

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	8.06	1.6361	0.0967	0.0000	4.0534
Health Club	34.77	7.0580	0.4171	0.0000	17.4859
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.73	1.1631	0.0687	0.0000	2.8816
Total		9.8573	0.5826	0.0000	24.4209

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

San Antonio Mixed Use - Baseline - Bay Area AQMD Air District, Annual

Equipment Type	Number
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11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: Housing Incentive Program Expansion

Vehicle Population Breakdown*	
5460005	Gasoline vehicles
271191	Diesel vehicles
95.3%	Gasoline vehicle %
4.7%	Diesel vehicle %

VMT per Vehicle Type	
7194297	Project VMT (CalEEMod output)
6853874	Gasoline vehicle VMT
340423	Diesel vehicle VMT

Gasoline Vehicles	
95.3%	Gasoline vehicle %
2.8748	Tons per year mobile NOX emissions (annual output in CalEEMod)
2.74	Gasoline vehicle tons per year NOX emissions
0.1236	Tons per year N2O emissions for gasoline vehicles**
0.1121	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
22.99	Diesel average miles per gallon*
0.06961	grams per mile N2O for diesel vehicles
23696.5	grams per year N2O for diesel vehicles
0.0236965	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.1358	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
40.5	CO2e emissions per year from N2O emissions from gasoline + diesel vehicles

Sources
<p>*Vehicle population source: EMFAC2017 (v1.0.2) Emissions Inventory Region Type: Air District Region: BAY AREA AQMD Calendar Year: 2030 Season: Annual Vehicle Classification: EMFAC2011 Categories</p> <p>**Methodology source: EMFAC2017 Volume III - Technical Documentation https://www.arb.ca.gov/msei/emfac2011-faq.htm</p> <p>***GWP source: Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.</p>

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: San Antonio Road Mixed Use Development

Vehicle Population Breakdown*	
5460005	Gasoline vehicles
271191	Diesel vehicles
95.3%	Gasoline vehicle %
4.7%	Diesel vehicle %

VMT per Vehicle Type	
1461689	Project VMT (CalEEMod output)
1392524	Gasoline vehicle VMT
69165	Diesel vehicle VMT

Gasoline Vehicles	
95.3%	Gasoline vehicle %
0.9936	Tons per year mobile NOX emissions (annual output in CalEEMod)
0.95	Gasoline vehicle tons per year NOX emissions
0.0589	Tons per year N2O emissions for gasoline vehicles**
0.0534	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
22.99	Diesel average miles per gallon*
0.06961	grams per mile N2O for diesel vehicles
4814.5	grams per year N2O for diesel vehicles
0.0048145	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.0582	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
17.4	CO2e emissions per year from N2O emissions from gasoline + diesel vehicles

Sources
<p>*Vehicle population source: EMFAC2017 (v1.0.2) Emissions Inventory Region Type: Air District Region: BAY AREA AQMD Calendar Year: 2030 Season: Annual Vehicle Classification: EMFAC2011 Categories</p> <p>**Methodology source: EMFAC2017 Volume III - Technical Documentation https://www.arb.ca.gov/msei/emfac2011-faq.htm</p> <p>***GWP source: Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.</p>