

**Appendix B:
Air Quality, Energy, and Greenhouse Gas Supporting Information**

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Appendix B: Air Quality, Energy, and GHG Supporting Information

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

**South San Francisco GP Update (Existing)
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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	109.55	1000sqft	0.00	109,550.00	0
Office Park	25,597.53	1000sqft	0.00	25,597,534.00	0
Elementary School	396.68	1000sqft	0.00	396,675.00	0
Industrial Park	5,753.50	1000sqft	0.00	5,753,496.00	0
City Park	0.56	Acre	0.00	24,275.00	0
Apartments Mid Rise	7,635.00	Dwelling Unit	0.00	4,547,040.00	21836
Single Family Housing	13,451.00	Dwelling Unit	0.00	386,375.00	38470
Strip Mall	4,070.86	1000sqft	0.00	4,070,861.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2019
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
 Land Use - Areas based on information provided in the Project Description
 Construction Phase - Operations run only
 Vehicle Trips - Operations run only
 Energy Use - Operations run only

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

Woodstoves - Regulation 8-3-301

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.11	2.51
tblEnergyUse	LightingElect	4.34	3.58
tblEnergyUse	LightingElect	4.34	3.58
tblEnergyUse	LightingElect	4.21	3.47
tblEnergyUse	LightingElect	5.88	4.88
tblEnergyUse	NT24E	2,561.86	3,054.10
tblEnergyUse	NT24E	5,096.44	6,155.97
tblEnergyUse	NT24NG	1,662.00	2,615.00
tblEnergyUse	NT24NG	6,192.92	2,615.00
tblEnergyUse	T24E	388.61	90.83
tblEnergyUse	T24E	0.86	0.59
tblEnergyUse	T24E	5.42	3.66
tblEnergyUse	T24E	5.42	3.66
tblEnergyUse	T24E	5.65	3.82
tblEnergyUse	T24E	321.72	45.71
tblEnergyUse	T24E	2.90	2.00
tblEnergyUse	T24NG	7,732.97	5,828.01
tblEnergyUse	T24NG	17.50	14.70
tblEnergyUse	T24NG	22.58	18.14
tblEnergyUse	T24NG	22.58	18.14
tblEnergyUse	T24NG	21.48	17.26
tblEnergyUse	T24NG	49,807.87	35,976.14
tblEnergyUse	T24NG	4.68	3.86
tblFireplaces	NumberGas	1,145.25	2,748.60
tblFireplaces	NumberGas	3,362.75	10,222.76
tblFireplaces	NumberNoFireplace	305.40	0.00

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tblFireplaces	NumberNoFireplace	1,076.08	0.00
tblFireplaces	NumberWood	1,297.95	0.00
tblFireplaces	NumberWood	5,783.93	0.00
tblLandUse	LandUseSquareFeet	25,597,500.00	25,597,534.00
tblLandUse	LandUseSquareFeet	396,680.00	396,675.00
tblLandUse	LandUseSquareFeet	5,753,500.00	5,753,496.00
tblLandUse	LandUseSquareFeet	24,393.60	24,275.00
tblLandUse	LandUseSquareFeet	7,635,000.00	4,547,040.00
tblLandUse	LandUseSquareFeet	24,211,800.00	386,375.00
tblLandUse	LandUseSquareFeet	4,070,860.00	4,070,861.00
tblLandUse	LotAcreage	2.51	0.00
tblLandUse	LotAcreage	587.64	0.00
tblLandUse	LotAcreage	9.11	0.00
tblLandUse	LotAcreage	132.08	0.00
tblLandUse	LotAcreage	0.56	0.00
tblLandUse	LotAcreage	200.92	0.00
tblLandUse	LotAcreage	4,367.21	0.00
tblLandUse	LotAcreage	93.45	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	30.00	0.00
tblVehicleTrips	CC_TTP	62.00	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
Appendix B tblVehicleTrips	CC_TTP	48.00	0.00

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tblVehicleTrips	CC_TTP	64.40	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	65.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00

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tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	HW_TTP	31.00	0.00
tblVehicleTrips	HW_TTP	31.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	63.00	0.00
tblVehicleTrips	PR_TP	50.00	0.00
tblVehicleTrips	PR_TP	79.00	0.00

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tblVehicleTrips	PR_TP	82.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	45.00	0.00
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.54	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	1.24	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	8.55	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	19.52	0.00
tblVehicleTrips	WD_TR	22.59	0.00
tblVehicleTrips	WD_TR	3.37	0.00
tblVehicleTrips	WD_TR	11.07	0.00
tblVehicleTrips	WD_TR	9.44	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblWoodstoves	NumberCatalytic	152.70	0.00
tblWoodstoves	NumberCatalytic	538.04	0.00
tblWoodstoves	NumberNoncatalytic	152.70	0.00
tblWoodstoves	NumberNoncatalytic	538.04	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00

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tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	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

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	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674
Energy	6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	115,315.1427	115,315.1427	9.5793	2.1801	116,204.2862
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	11,266.3090	0.0000	11,266.3090	665.8198	0.0000	27,911.8037
Water						0.0000	0.0000		0.0000	0.0000	2,407.5377	5,056.6677	7,464.2054	248.0953	5.9379	15,436.0848
Total	193.2345	59.9697	194.7916	0.3680	0.0000	5.4195	5.4195	0.0000	5.4195	5.4195	13,673.8467	122,247.5356	135,921.3823	923.7782	8.1477	161,443.8421

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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	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674
Energy	6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	115,315.1427	115,315.1427	9.5793	2.1801	116,204.2862
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	11,266.3090	0.0000	11,266.3090	665.8198	0.0000	27,911.8037
Water						0.0000	0.0000		0.0000	0.0000	2,407.5377	5,056.6677	7,464.2054	248.0953	5.9379	15,436.0848
Total	193.2345	59.9697	194.7916	0.3680	0.0000	5.4195	5.4195	0.0000	5.4195	5.4195	13,673.8467	122,247.5356	135,921.3823	923.7782	8.1477	161,443.8421

	ROG	NOx	CO	SO2	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	1/1/2018	12/31/2017	5	0	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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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			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
Elementary School	0.00	0.00	0.00		
Government Office Building	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Elementary School	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Industrial Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Office Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
City Park	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
Elementary School	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
Government Office Building	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319

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Industrial Park	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
Office Park	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
Single Family Housing	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319
Strip Mall	0.576419	0.058343	0.184192	0.088965	0.020745	0.004207	0.015495	0.004729	0.002350	0.002569	0.039870	0.000797	0.001319

5.0 Energy Detail

Historical Energy Use: Y

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	51,671.9414	51,671.9414	8.3595	1.0133	52,182.8852
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51,671.9414	51,671.9414	8.3595	1.0133	52,182.8852
NaturalGas Mitigated	6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	63,643.2013	63,643.2013	1.2198	1.1668	64,021.4010
NaturalGas Unmitigated	6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	63,643.2013	63,643.2013	1.2198	1.1668	64,021.4010

5.2 Energy by Land Use - NaturalGas

Unmitigated

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	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.44624e+007	0.3476	2.9703	1.2640	0.0190		0.2402	0.2402		0.2402	0.2402	0.0000	3,439.9582	3,439.9582	0.0659	0.0631	3,460.4001
City Park	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
Elementary School	6.47374e+006	0.0349	0.3173	0.2666	1.9000e-003		0.0241	0.0241		0.0241	0.0241	0.0000	345.4632	345.4632	6.6200e-003	6.3300e-003	347.5161
Government Office Building	2.09788e+006	0.0113	0.1028	0.0864	6.2000e-004		7.8200e-003	7.8200e-003		7.8200e-003	7.8200e-003	0.0000	111.9510	111.9510	2.1500e-003	2.0500e-003	112.6163
Industrial Park	1.10179e+008	0.5941	5.4010	4.5368	0.0324		0.4105	0.4105		0.4105	0.4105	0.0000	5,879.5950	5,879.5950	0.1127	0.1078	5,914.5345
Office Park	4.71763e+008	2.5438	23.1256	19.4255	0.1388		1.7576	1.7576		1.7576	1.7576	0.0000	25,175.0463	25,175.0463	0.4825	0.4615	25,324.6491
Single Family Housing	5.19089e+008	2.7990	23.9188	10.1782	0.1527		1.9339	1.9339		1.9339	1.9339	0.0000	27,700.5885	27,700.5885	0.5309	0.5078	27,865.1992
Strip Mall	1.85631e+007	0.1001	0.9100	0.7644	5.4600e-003		0.0692	0.0692		0.0692	0.0692	0.0000	990.5991	990.5991	0.0190	0.0182	996.4857
Total		6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	63,643.2013	63,643.2013	1.2198	1.1668	64,021.4010

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.44624e+007	0.3476	2.9703	1.2640	0.0190		0.2402	0.2402		0.2402	0.2402	0.0000	3,439.9582	3,439.9582	0.0659	0.0631	3,460.4001
City Park	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
Elementary School	6.47374e+006	0.0349	0.3173	0.2666	1.9000e-003		0.0241	0.0241		0.0241	0.0241	0.0000	345.4632	345.4632	6.6200e-003	6.3300e-003	347.5161

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

Government Office Building	2.09788e+006	0.0113	0.1028	0.0864	6.2000e-004		7.8200e-003	7.8200e-003		7.8200e-003	7.8200e-003	0.0000	111.9510	111.9510	2.1500e-003	2.0500e-003	112.6163
Industrial Park	1.10179e+008	0.5941	5.4010	4.5368	0.0324		0.4105	0.4105		0.4105	0.4105	0.0000	5,879.5950	5,879.5950	0.1127	0.1078	5,914.5345
Office Park	4.71763e+008	2.5438	23.1256	19.4255	0.1388		1.7576	1.7576		1.7576	1.7576	0.0000	25,175.0463	25,175.0463	0.4825	0.4615	25,324.6491
Single Family Housing	5.19089e+008	2.7990	23.9188	10.1782	0.1527		1.9339	1.9339		1.9339	1.9339	0.0000	27,700.5885	27,700.5885	0.5309	0.5078	27,865.1992
Strip Mall	1.85631e+007	0.1001	0.9100	0.7644	5.4600e-003		0.0692	0.0692		0.0692	0.0692	0.0000	990.5991	990.5991	0.0190	0.0182	996.4857
Total		6.4308	56.7459	36.5218	0.3508		4.4431	4.4431		4.4431	4.4431	0.0000	63,643.2013	63,643.2013	1.2198	1.1668	64,021.4010

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartments Mid Rise	2.96724e+007	2,745.4056	0.4442	0.0538	2,772.5528
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	1.73347e+006	160.3872	0.0260	3.1500e-003	161.9731
Government Office Building	1.31898e+006	122.0372	0.0197	2.3900e-003	123.2439
Industrial Park	6.92721e+007	6,409.3152	1.0369	0.1257	6,472.6920
Office Park	3.0973e+008	28,657.4027	4.6362	0.5620	28,940.7736
Single Family Housing	1.05059e+008	9,720.4831	1.5726	0.1906	9,816.6014
Strip Mall	4.16856e+007	3,856.9105	0.6240	0.0756	3,895.0485

Appendix B

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

Total		51,671.941	8.3595	1.0133	52,182.8852
		5			

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	2.96724e+007	2,745.4056	0.4442	0.0538	2,772.5528
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	1.73347e+006	160.3872	0.0260	3.1500e-003	161.9731
Government Office Building	1.31898e+006	122.0372	0.0197	2.3900e-003	123.2439
Industrial Park	6.92721e+007	6,409.3152	1.0369	0.1257	6,472.6920
Office Park	3.0973e+008	28,657.4027	4.6362	0.5620	28,940.7736
Single Family Housing	1.05059e+008	9,720.4831	1.5726	0.1906	9,816.6014
Strip Mall	4.16856e+007	3,856.9105	0.6240	0.0756	3,895.0485
Total		51,671.941	8.3595	1.0133	52,182.8852
		5			

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674
Unmitigated	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674

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	22.2071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	159.5849					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1636	1.3983	0.5950	8.9300e-003		0.1131	0.1131		0.1131	0.1131	0.0000	1,619.3354	1,619.3354	0.0310	0.0297	1,628.9583
Landscaping	4.8480	1.8255	157.6747	8.2900e-003		0.8633	0.8633		0.8633	0.8633	0.0000	256.3898	256.3898	0.2528	0.0000	262.7091
Total	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674

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

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	22.2071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	159.5849					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1636	1.3983	0.5950	8.9300e-003		0.1131	0.1131		0.1131	0.1131	0.0000	1,619.3354	1,619.3354	0.0310	0.0297	1,628.9583
Landscaping	4.8480	1.8255	157.6747	8.2900e-003		0.8633	0.8633		0.8633	0.8633	0.0000	256.3898	256.3898	0.2528	0.0000	262.7091
Total	186.8036	3.2238	158.2697	0.0172		0.9764	0.9764		0.9764	0.9764	0.0000	1,875.7252	1,875.7252	0.2838	0.0297	1,891.6674

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7,464.2054	248.0953	5.9379	15,436.0848
Unmitigated	7,464.2054	248.0953	5.9379	15,436.0848

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	497.451 / 313.61	508.4226	16.2662	0.3896	1,031.1822
City Park	0 / 0.66723	0.2161	3.0000e-005	0.0000	0.2182
Elementary School	11.5025 / 29.5778	18.9862	0.3773	9.1500e-003	31.1454
Government Office Building	21.7632 / 13.3387	22.1196	0.7116	0.0170	44.9888
Industrial Park	1330.5 / 0	1,088.2134	43.4620	1.0368	2,483.7155
Office Park	4549.54 / 2788.43	4,624.0538	148.7614	3.5628	9,404.8033
Single Family Housing	876.387 / 552.505	895.7161	28.6570	0.6864	1,816.6905
Strip Mall	301.539 / 184.814	306.4776	9.8598	0.2361	623.3408
Total		7,464.2054	248.0953	5.9379	15,436.0848

Mitigated

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

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	497.451 / 313.61	508.4226	16.2662	0.3896	1,031.1822
City Park	0 / 0.66723	0.2161	3.0000e-005	0.0000	0.2182
Elementary School	11.5025 / 29.5778	18.9862	0.3773	9.1500e-003	31.1454
Government Office Building	21.7632 / 13.3387	22.1196	0.7116	0.0170	44.9888
Industrial Park	1330.5 / 0	1,088.2134	43.4620	1.0368	2,483.7155
Office Park	4549.54 / 2788.43	4,624.0538	148.7614	3.5628	9,404.8033
Single Family Housing	876.387 / 552.505	895.7161	28.6570	0.6864	1,816.6905
Strip Mall	301.539 / 184.814	306.4776	9.8598	0.2361	623.3408
Total		7,464.2054	248.0953	5.9379	15,436.0848

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,266.909	665.8198	0.0000	27,911.803
	0			7

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

Unmitigated	11,266.309	665.8198	0.0000	27,911.803
	0			7

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3512.1	712.9246	42.1326	0.0000	1,766.2404
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Elementary School	515.68	104.6784	6.1863	0.0000	259.3363
Government Office Building	101.88	20.6807	1.2222	0.0000	51.2356
Industrial Park	7134.34	1,448.2066	85.5866	0.0000	3,587.8704
Office Park	23805.7	4,832.3379	285.5830	0.0000	11,971.9126
Single Family Housing	16157.4	3,279.8062	193.8310	0.0000	8,125.5810
Strip Mall	4274.4	867.6646	51.2775	0.0000	2,149.6023
Total		11,266.3090	665.8198	0.0000	27,911.8037

Mitigated

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3512.1	712.9246	42.1326	0.0000	1,766.2404
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Elementary School	515.68	104.6784	6.1863	0.0000	259.3363
Government Office Building	101.88	20.6807	1.2222	0.0000	51.2356
Industrial Park	7134.34	1,448.2066	85.5866	0.0000	3,587.8704
Office Park	23805.7	4,832.3379	285.5830	0.0000	11,971.9126
Single Family Housing	16157.4	3,279.8062	193.8310	0.0000	8,125.5810
Strip Mall	4274.4	867.6646	51.2775	0.0000	2,149.6023
Total		11,266.3090	665.8198	0.0000	27,911.8037

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Total Mobile Emissions (2019)

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	421,263	929	322,267
CO	5,154,484	11,364	3,943,197
NOx	1,134,234	2,501	867,693
SOx	13,222	29	10,115
PM	103,845	229	79,442
TOG	459,762	1,014	351,720
ROG	385,855	851	295,181
CO2	1,334,064,790	2,941,106	1,020,563,753
CH4	61,241	135	46,850
PM10	1,118,668	2,466.24	855,784.83
PM2_5	263,138	580.12	201,301.72

CO2E (2019)	
lbs/yr	MT/yr
1,021,734,995	463,451

RUNEX, BW Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	172,635	381	132,066
CO	3,883,254	8,561	2,970,701
NOx	1,006,801	2,220	770,206
SOx	12,999	29	9,944
PM	73,515	162	56,239
TOG	196,279	433	150,154
ROG	138,072	304	105,626
CO2	1,312,899,127	2,894,444	1,004,371,954
CH4	42,037	93	32,158
PM10	72,747	160	55,652
PM2_5	41,585	92	31,813

STREX Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	119,792	264	91,641
CO	1,176,150	2,593	899,758
NOx	90,402	199	69,157
SOx	165	0	126
PM	571	1	437
TOG	125,043	276	95,658
ROG	114,230	252	87,386
CO2	15,036,985	33,151	11,503,341
CH4	17,251	38	13,197
PM10	511	1	391
PM2_5	471	1	360

HOTSOAK Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	20,560	45	15,728
CO	0	0	0
NOx	0	0	0
SOx	0	0	0
PM	0	0	0
TOG	21,981	48	16,815
ROG	21,981	48	16,815
CO2	0	0	0
CH4	0	0	0
PM10	0	0	0
PM2_5	0	0	0

IDLEX Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	13,639	30	10,434
CO	95,081	210	72,737
NOx	37,031	82	28,329
SOx	59	0	45
PM	507	1	388
TOG	15,279	34	11,689
ROG	10,392	23	7,950
CO2	6,128,679	13,511	4,688,458
CH4	1,954	4	1,495
PM10	504	1	386
PM2_5	483	1	369

TW Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	0	0	0
CO	0	0	0
NOx	0	0	0
SOx	0	0	0
PM	29,252	64	22,378
TOG	0	0	0
ROG	0	0	0
CO2	0	0	0
CH4	0	0	0
PM10	29,252	64	22,378
PM2_5	7,313	16	5,594

RUNLOSS Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	94,638	209	72,398
CO	0	0	0
NOx	0	0	0
SOx	0	0	0
PM	0	0	0
TOG	101,180	223	77,403
ROG	101,180	223	77,403
CO2	0	0	0
CH4	0	0	0
PM10	0	0	0
PM2_5	0	0	0

Fugitive Dust Emissions

Pollutant	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/yr)
	Base	Base	Base
HC	0	0	0
CO	0	0	0
NOx	0	0	0
SOx	0	0	0
PM	0	0	0
TOG	0	0	0
ROG	0	0	0
CO2	0	0	0
CH4	0	0	0
PM10	1,015,654	2,239	776,980
PM2_5	213,287	470	163,166

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

**South San Francisco GP Update (General Plan Buildout)
San Francisco County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	177.92	1000sqft	0.00	177,917.00	0
Office Park	34,174.67	1000sqft	0.00	34,174,670.00	0
Elementary School	397.29	1000sqft	0.00	397,288.00	0
Industrial Park	6,298.29	1000sqft	0.00	6,298,288.00	0
City Park	0.56	Acre	0.00	24,275.00	0
Apartments Mid Rise	23,865.00	Dwelling Unit	0.00	9,753,931.00	68254
Single Family Housing	15,094.00	Dwelling Unit	0.00	386,375.00	43169
Strip Mall	8,980.48	1000sqft	0.00	8,980,476.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Areas based on information provided in the Project Description
- Construction Phase - Operations run only
- Vehicle Trips - Operations run only
- Energy Use - Operations run only

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

Woodstoves - Regulation 8-3-301

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	3,579.75	7,646.35
tblFireplaces	NumberGas	3,773.50	11,471.44
tblFireplaces	NumberNoFireplace	954.60	0.00
tblFireplaces	NumberNoFireplace	1,207.52	0.00
tblFireplaces	NumberWood	4,057.05	0.00
tblFireplaces	NumberWood	6,490.42	0.00
tblLandUse	LandUseSquareFeet	177,920.00	177,917.00
tblLandUse	LandUseSquareFeet	34,174,700.00	34,174,670.00
tblLandUse	LandUseSquareFeet	397,290.00	397,288.00
tblLandUse	LandUseSquareFeet	6,298,290.00	6,298,288.00
tblLandUse	LandUseSquareFeet	24,393.60	24,275.00
tblLandUse	LandUseSquareFeet	23,865,000.00	9,753,931.00
tblLandUse	LandUseSquareFeet	27,169,200.00	386,375.00
tblLandUse	LandUseSquareFeet	8,980,480.00	8,980,476.00
tblLandUse	LotAcreage	4.08	0.00
tblLandUse	LotAcreage	784.54	0.00
tblLandUse	LotAcreage	9.12	0.00
tblLandUse	LotAcreage	144.59	0.00
tblLandUse	LotAcreage	0.56	0.00
tblLandUse	LotAcreage	628.03	0.00
tblLandUse	LotAcreage	4,900.65	0.00
tblLandUse	LotAcreage	206.16	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00

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tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	30.00	0.00
tblVehicleTrips	CC_TTP	62.00	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	64.40	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	65.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00

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tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	16.60	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	HW_TTP	31.00	0.00
tblVehicleTrips	HW_TTP	31.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00

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tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	63.00	0.00
tblVehicleTrips	PR_TP	50.00	0.00
tblVehicleTrips	PR_TP	79.00	0.00
tblVehicleTrips	PR_TP	82.00	0.00
tblVehicleTrips	PR_TP	86.00	0.00
tblVehicleTrips	PR_TP	45.00	0.00
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.54	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	1.24	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	8.55	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	19.52	0.00
tblVehicleTrips	WD_TR	22.59	0.00
tblVehicleTrips	WD_TR	3.37	0.00
tblVehicleTrips	WD_TR	11.07	0.00
tblVehicleTrips	WD_TR	9.44	0.00

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tblVehicleTrips	WD_TR	44.32	0.00
tblWoodstoves	NumberCatalytic	477.30	0.00
tblWoodstoves	NumberCatalytic	603.76	0.00
tblWoodstoves	NumberNoncatalytic	477.30	0.00
tblWoodstoves	NumberNoncatalytic	603.76	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
2022					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Maximum					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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

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	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550
Energy	8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	158,229.1811	158,229.1811	13.5338	2.9949	159,459.9919
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	15,998.2720	0.0000	15,998.2720	945.4708	0.0000	39,635.0416
Water						0.0000	0.0000		0.0000	0.0000	3,420.2775	7,270.0352	10,690.3127	352.4715	8.4374	22,016.4463
Total	285.6601	80.7932	337.7047	0.4947	0.0000	7.6784	7.6784	0.0000	7.6784	7.6784	19,418.5495	168,359.2868	187,777.8363	1,311.9738	11.4760	223,997.0347

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

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	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550
Energy	8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	158,229.1811	158,229.1811	13.5338	2.9949	159,459.9919
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	15,998.2720	0.0000	15,998.2720	945.4708	0.0000	39,635.0416
Water						0.0000	0.0000		0.0000	0.0000	3,420.2775	7,270.0352	10,690.3127	352.4715	8.4374	22,016.4463
Total	285.6601	80.7932	337.7047	0.4947	0.0000	7.6784	7.6784	0.0000	7.6784	7.6784	19,418.5495	168,359.2868	187,777.8363	1,311.9738	11.4760	223,997.0347

	ROG	NOx	CO	SO2	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	4/19/2022	4/18/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

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Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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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			0.00	0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
City Park	0.00	0.00	0.00		
Elementary School	0.00	0.00	0.00		
Government Office Building	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Elementary School	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Industrial Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Office Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
City Park	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
Elementary School	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
Government Office Building	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486

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Industrial Park	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
Office Park	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
Single Family Housing	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486
Strip Mall	0.537654	0.062024	0.189846	0.122588	0.022361	0.006078	0.020465	0.003259	0.001513	0.001791	0.028917	0.001017	0.002486

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	73,632.5869	73,632.5869	11.9123	1.4439	74,360.6824
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73,632.5869	73,632.5869	11.9123	1.4439	74,360.6824
NaturalGas Mitigated	8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	84,596.5942	84,596.5942	1.6214	1.5509	85,099.3095
NaturalGas Unmitigated	8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	84,596.5942	84,596.5942	1.6214	1.5509	85,099.3095

5.2 Energy by Land Use - NaturalGas

Unmitigated

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	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.01492e+008	1.0865	9.2845	3.9508	0.0593		0.7507	0.7507		0.7507	0.7507	0.0000	10,752.4036	10,752.4036	0.2061	0.1971	10,816.2998
City Park	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
Elementary School	6.48374e+006	0.0350	0.3178	0.2670	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	345.9971	345.9971	6.6300e-003	6.3400e-003	348.0532
Government Office Building	3.40711e+006	0.0184	0.1670	0.1403	1.0000e-003		0.0127	0.0127		0.0127	0.0127	0.0000	181.8164	181.8164	3.4800e-003	3.3300e-003	182.8968
Industrial Park	1.20612e+008	0.6504	5.9124	4.9664	0.0355		0.4493	0.4493		0.4493	0.4493	0.0000	6,436.3271	6,436.3271	0.1234	0.1180	6,474.5750
Office Park	6.29839e+008	3.3962	30.8745	25.9346	0.1853		2.3465	2.3465		2.3465	2.3465	0.0000	33,610.6166	33,610.6166	0.6442	0.6162	33,810.3477
Single Family Housing	5.82495e+008	3.1409	26.8404	11.4215	0.1713		2.1701	2.1701		2.1701	2.1701	0.0000	31,084.1337	31,084.1337	0.5958	0.5699	31,268.8512
Strip Mall	4.0951e+007	0.2208	2.0074	1.6862	0.0120		0.1526	0.1526		0.1526	0.1526	0.0000	2,185.2997	2,185.2997	0.0419	0.0401	2,198.2859
Total		8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	84,596.5942	84,596.5942	1.6214	1.5509	85,099.3095

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.01492e+008	1.0865	9.2845	3.9508	0.0593		0.7507	0.7507		0.7507	0.7507	0.0000	10,752.4036	10,752.4036	0.2061	0.1971	10,816.2998
City Park	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
Elementary School	6.48374e+006	0.0350	0.3178	0.2670	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	345.9971	345.9971	6.6300e-003	6.3400e-003	348.0532

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Government Office Building	3.40711e+006	0.0184	0.1670	0.1403	1.0000e-003		0.0127	0.0127		0.0127	0.0127	0.0000	181.8164	181.8164	3.4800e-003	3.3300e-003	182.8968
Industrial Park	1.20612e+008	0.6504	5.9124	4.9664	0.0355		0.4493	0.4493		0.4493	0.4493	0.0000	6,436.3271	6,436.3271	0.1234	0.1180	6,474.5750
Office Park	6.29839e+008	3.3962	30.8745	25.9346	0.1853		2.3465	2.3465		2.3465	2.3465	0.0000	33,610.6166	33,610.6166	0.6442	0.6162	33,810.3477
Single Family Housing	5.82495e+008	3.1409	26.8404	11.4215	0.1713		2.1701	2.1701		2.1701	2.1701	0.0000	31,084.1337	31,084.1337	0.5958	0.5699	31,268.8512
Strip Mall	4.0951e+007	0.2208	2.0074	1.6862	0.0120		0.1526	0.1526		0.1526	0.1526	0.0000	2,185.2997	2,185.2997	0.0419	0.0401	2,198.2859
Total		8.5481	75.4040	48.3667	0.4663		5.9060	5.9060		5.9060	5.9060	0.0000	84,596.5942	84,596.5942	1.6214	1.5509	85,099.3095

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartments Mid Rise	9.27482e+007	8,581.4151	1.3883	0.1683	8,666.2701
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	1.73615e+006	160.6350	0.0260	3.1500e-003	162.2234
Government Office Building	2.14212e+006	198.1971	0.0321	3.8900e-003	200.1569
Industrial Park	7.58314e+007	7,016.2060	1.1351	0.1376	7,085.5838
Office Park	4.13514e+008	38,259.8293	6.1897	0.7503	38,638.1511
Single Family Housing	1.17892e+008	10,907.8115	1.7647	0.2139	11,015.6703
Strip Mall	9.19601e+007	8,508.4929	1.3765	0.1669	8,592.6268

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Total		73,632.586	11.9123	1.4439	74,360.6824
		9			

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	9.27482e+007	8,581.4151	1.3883	0.1683	8,666.2701
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	1.73615e+006	160.6350	0.0260	3.1500e-003	162.2234
Government Office Building	2.14212e+006	198.1971	0.0321	3.8900e-003	200.1569
Industrial Park	7.58314e+007	7,016.2060	1.1351	0.1376	7,085.5838
Office Park	4.13514e+008	38,259.8293	6.1897	0.7503	38,638.1511
Single Family Housing	1.17892e+008	10,907.8115	1.7647	0.2139	11,015.6703
Strip Mall	9.19601e+007	8,508.4929	1.3765	0.1669	8,592.6268
Total		73,632.586	11.9123	1.4439	74,360.6824
		9			

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550
Unmitigated	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550

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	33.2250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	234.9900					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2412	2.0608	0.8769	0.0132		0.1666	0.1666		0.1666	0.1666	0.0000	2,386.6509	2,386.6509	0.0457	0.0438	2,400.8336
Landscaping	8.6558	3.3284	288.4610	0.0153		1.6058	1.6058		1.6058	1.6058	0.0000	473.4196	473.4196	0.4521	0.0000	484.7214
Total	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550

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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	33.2250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	234.9900					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2412	2.0608	0.8769	0.0132		0.1666	0.1666		0.1666	0.1666	0.0000	2,386.6509	2,386.6509	0.0457	0.0438	2,400.8336	
Landscaping	8.6558	3.3284	288.4610	0.0153		1.6058	1.6058		1.6058	1.6058	0.0000	473.4196	473.4196	0.4521	0.0000	484.7214	
Total	277.1120	5.3892	289.3380	0.0285		1.7724	1.7724		1.7724	1.7724	0.0000	2,860.0705	2,860.0705	0.4978	0.0438	2,885.5550	

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10,690.3127	352.4715	8.4374	22,016.4463
Unmitigated	10,690.3127	352.4715	8.4374	22,016.4463

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1554.9 / 980.264	1,589.1953	50.8438	1.2178	3,223.2042
City Park	0 / 0.66723	0.2161	3.0000e-005	0.0000	0.2182
Elementary School	11.5202 / 29.6233	19.0154	0.3779	9.1600e-003	31.1933
Government Office Building	35.3455 / 21.6634	35.9244	1.1557	0.0277	73.0662
Industrial Park	1456.48 / 0	1,191.2546	47.5774	1.1349	2,718.8947
Office Park	6074 / 3722.77	6,173.4799	198.6083	4.7566	12,556.1610
Single Family Housing	983.435 / 619.992	1,005.1252	32.1574	0.7703	2,038.5939
Strip Mall	665.207 / 407.707	676.1018	21.7510	0.5209	1,375.1148
Total		10,690.3127	352.4714	8.4374	22,016.4463

Mitigated

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Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1554.9 / 980.264	1,589.1953	50.8438	1.2178	3,223.2042
City Park	0 / 0.66723	0.2161	3.0000e-005	0.0000	0.2182
Elementary School	11.5202 / 29.6233	19.0154	0.3779	9.1600e-003	31.1933
Government Office Building	35.3455 / 21.6634	35.9244	1.1557	0.0277	73.0662
Industrial Park	1456.48 / 0	1,191.2546	47.5774	1.1349	2,718.8947
Office Park	6074 / 3722.77	6,173.4799	198.6083	4.7566	12,556.1610
Single Family Housing	983.435 / 619.992	1,005.1252	32.1574	0.7703	2,038.5939
Strip Mall	665.207 / 407.707	676.1018	21.7510	0.5209	1,375.1148
Total		10,690.312	352.4714	8.4374	22,016.4463
		7			

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	49,898.272	945.4708	0.0000	39,635.0416
	0			

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

Unmitigated	15,998.272	945.4708	0.0000	39,635.0416
	0			

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	10977.9	2,228.4145	131.6955	0.0000	5,520.8026
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Elementary School	516.48	104.8408	6.1959	0.0000	259.7386
Government Office Building	165.47	33.5889	1.9851	0.0000	83.2151
Industrial Park	7809.88	1,585.3351	93.6906	0.0000	3,927.6005
Office Park	31782.5	6,451.5542	381.2759	0.0000	15,983.4524
Single Family Housing	18131	3,680.4251	217.5069	0.0000	9,118.0974
Strip Mall	9429.5	1,914.1033	113.1203	0.0000	4,742.1099
Total		15,998.2719	945.4708	0.0000	39,635.0416

Mitigated

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	10977.9	2,228.4145	131.6955	0.0000	5,520.8026
City Park	0.05	0.0102	6.0000e-004	0.0000	0.0252
Elementary School	516.48	104.8408	6.1959	0.0000	259.7386
Government Office Building	165.47	33.5889	1.9851	0.0000	83.2151
Industrial Park	7809.88	1,585.3351	93.6906	0.0000	3,927.6005
Office Park	31782.5	6,451.5542	381.2759	0.0000	15,983.4524
Single Family Housing	18131	3,680.4251	217.5069	0.0000	9,118.0974
Strip Mall	9429.5	1,914.1033	113.1203	0.0000	4,742.1099
Total		15,998.2719	945.4708	0.0000	39,635.0416

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Total Mobile Emissions (2040)

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	213,549	301,075	471	664	163,366	230,323
CO	3,187,201	4,382,050	7,027	9,661	2,438,219	3,352,282
NOx	320,578	446,067	707	983	245,243	341,242
SOx	13,402	18,534	30	41	10,253	14,178
PM	110,071	150,008	243	331	84,205	114,756
TOG	228,635	322,414	504	711	174,907	246,648
ROG	195,319	275,386	431	607	149,420	210,671
CO2	1,359,748,640	1,880,753,481	2,997,729	4,146,347	1,040,211,979	1,438,782,319
CH4	32,661	45,738	72	101	24,986	34,990
PM10	109,705	2,124,113	242	4,682.86	83,924.67	1,624,953.16
PM2_5	37,112	465,382	82	1,025.99	28,391.01	356,018.87

CO2E (2040, PP)	
lbs/yr	MT/yr
1,439,657,065	653,016.93

RUNEX, BW Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	62,192	88,991	137	196	47,577	68,079
CO	2,444,903	3,371,715	5,390	7,433	1,870,359	2,579,373
NOx	225,304	316,390	497	698	172,358	242,040
SOx	13,188	18,241	29	40	10,089	13,955
PM	67,624	92,233	149	203	51,733	70,559
TOG	67,651	96,808	149	213	51,753	74,058
ROG	41,639	59,721	92	132	31,854	45,687
CO2	1,338,489,111	1,851,817,294	2,950,860	4,082,553	1,023,948,373	1,416,646,045
CH4	22,839	32,369	50	71	17,472	24,763
PM10	67,290	91,754	148	202	51,477	70,192
PM2_5	26,207	35,867	58	79	20,048	27,439

STREX Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	49,107	66,839	108	147	37,567	51,132
CO	664,909	905,003	1,466	1,995	508,657	692,330
NOx	74,560	101,483	164	224	57,039	77,635
SOx	167	227	0	1	128	174
PM	291	396	1	1	222	303
TOG	51,259	69,768	113	154	39,213	53,372
ROG	46,825	63,733	103	141	35,821	48,756
CO2	15,924,543	21,674,777	35,108	47,785	12,182,325	16,581,272
CH4	8,537	11,619	19	26	6,531	8,889
PM10	260	354	1	1	199	271
PM2_5	239	325	1	1	183	249

HOTSOAK Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	11,744	15,985	26	35	8,984	12,229
CO	0	0	0	0	0	0
NOx	0	0	0	0	0	0
SOx	0	0	0	0	0	0
PM	0	0	0	0	0	0
TOG	12,556	17,090	28	38	9,606	13,074
ROG	12,556	17,090	28	38	9,606	13,074
CO2	0	0	0	0	0	0
CH4	0	0	0	0	0	0
PM10	0	0	0	0	0	0
PM2_5	0	0	0	0	0	0

IDLEX Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	7,708	10,491	17	23	5,896	8,026
CO	77,389	105,333	171	232	59,202	80,580
NOx	20,714	28,193	46	62	15,846	21,568
SOx	48	65	0	0	37	50
PM	182	247	0	1	139	189
TOG	8,647	11,770	19	26	6,615	9,004
ROG	5,778	7,864	13	17	4,420	6,016
CO2	5,334,986	7,261,410	11,762	16,009	4,081,281	5,555,002
CH4	1,286	1,750	3	4	983	1,339
PM10	180	245	0	1	138	188
PM2_5	173	235	0	1	132	180

TW Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	0	0	0	0	0	0
CO	0	0	0	0	0	0
NOx	0	0	0	0	0	0
SOx	0	0	0	0	0	0
PM	41,975	57,132	93	126	32,111	43,706
TOG	0	0	0	0	0	0
ROG	0	0	0	0	0	0
CO2	0	0	0	0	0	0
CH4	0	0	0	0	0	0
PM10	41,975	57,132	93	126	32,111	43,706
PM2_5	10,494	14,283	23	31	8,028	10,926

RUNLOSS Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	82,798	118,768	183	262	63,341	90,858
CO	0	0	0	0	0	0
NOx	0	0	0	0	0	0
SOx	0	0	0	0	0	0
PM	0	0	0	0	0	0
TOG	88,522	126,979	195	280	67,720	97,139
ROG	88,522	126,979	195	280	67,720	97,139
CO2	0	0	0	0	0	0
CH4	0	0	0	0	0	0
PM10	0	0	0	0	0	0
PM2_5	0	0	0	0	0	0

Fugitive Dust Emissions

Pollutant	Emissions (g/day)		Emissions (lb/day)		Emissions (lb/yr)	
	NP	PP	NP	PP	NP	PP
HC	0	0	0	0	0	0
CO	0	0	0	0	0	0
NOx	0	0	0	0	0	0
SOx	0	0	0	0	0	0
PM	0	0	0	0	0	0
TOG	0	0	0	0	0	0
ROG	0	0	0	0	0	0
CO2	0	0	0	0	0	0
CH4	0	0	0	0	0	0
PM10	0	1,974,628	0	4,353	0	1,510,600
PM2_5	0	414,672	0	914	0	317,226

Electricity

Project Breakdown	GP Buildout	Existing	Net
Apartments Mid Rise	92,748,200	29,672,400	63,075,800
Park	0	0	0
Elementary School	1,736,150	1,733,470	2,680
Government Office Building	2,142,120	1,318,980	823,140
Industrial Park	75,831,400	69,272,100	6,559,300
Office Park	413,514,000	309,730,000	103,784,000
Single Family Housing	117,892,000	105,059,000	12,833,000
Strip Mall	91,960,100	41,685,600	50,274,500
TOTAL	795,823,970	558,471,550	237,352,420

Natural Gas

Project Breakdown	GP Buildout	Existing	Net
Apartments Mid Rise	201,492,000	64,462,400	137,029,600
Park	0	0	0
Elementary School	6,483,740	6,473,740	10,000
Government Office Building	3,407,110	2,097,880	1,309,230
Industrial Park	120,612,000	110,179,000	10,433,000
Office Park	629,839,000	471,763,000	158,076,000
Single Family Housing	582,495,000	519,089,000	63,406,000
Strip Mall	40,951,000	18,563,100	22,387,900
TOTAL	1,585,279,850	1,192,628,120	392,651,730