

APPENDIX 4.1

Air Quality Analysis

Green Valley II - Solano-San Francisco County, Annual

Green Valley II ALTERNATIVE 1
Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	591.00	Space	5.32	236,400.00	0
Apartments Mid Rise	270.00	Dwelling Unit	5.70	248,168.00	821
Strip Mall	22.61	1000sqft	2.87	22,610.00	45

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	427	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - PG&E's default 2008 CO2 intensity factor updated to the most recent (2013) emission factor in PG&E (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Land Use - Based on Green Valley Mixed-Use Site Plan, and Project Matrix. Average household size in Fairfield is 3.04. The projects 270 units would house approximately 821 residents.

Construction Phase - Increased total days by 40% to reflect construction schedule beginning in Summer of 2019 and finishing Summer of 2021.

Grading - Entire site is 13.31 acres. Material balanced on site.

Vehicle Trips - Trip generation based off Table 7 of the traffic study.

Woodstoves - No wood burning.

Energy Use -

Construction Off-road Equipment Mitigation - Fugitive dust mitigation reflects BAAQMD mitigation recommended for all construction projects.

Area Mitigation -

Energy Mitigation - Design features provided by applicants sustainable design feature memo. On-site energy based on 37,200 of roof used for solar panels, with each panel approximately 15sf, generating 320w each. Assumes 28.5 kwh/sf.

Water Mitigation - Design features provided by applicants sustainable design feature memo.

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	300.00	420.00
tblConstructionPhase	NumDays	30.00	42.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	10.00	14.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	40.50	0.00
tblFireplaces	NumberWood	45.90	0.00
tblGrading	AcresOfGrading	105.00	13.31
tblLandUse	LandUseSquareFeet	270,000.00	248,168.00
tblLandUse	LotAcreage	7.11	5.70

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tblLandUse	LotAcreage	0.52	2.87
tblLandUse	Population	772.00	821.00
tblLandUse	Population	0.00	45.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblVehicleTrips	ST_TR	6.39	6.99
tblVehicleTrips	ST_TR	42.04	90.45
tblVehicleTrips	SU_TR	5.86	6.42
tblVehicleTrips	SU_TR	20.43	43.96
tblVehicleTrips	WD_TR	6.65	7.28
tblVehicleTrips	WD_TR	44.32	95.35
tblWoodstoves	NumberCatalytic	5.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2819	2.6405	1.9421	4.3600e-003	0.3729	0.1190	0.4919	0.1702	0.1106	0.2808	0.0000	393.6468	393.6468	0.0731	0.0000	395.4741
2020	0.4625	3.6747	3.4941	9.3400e-003	0.3744	0.1541	0.5285	0.1010	0.1449	0.2459	0.0000	841.5867	841.5867	0.0947	0.0000	843.9547
2021	2.0755	1.2463	1.2986	3.3200e-003	0.1255	0.0516	0.1771	0.0338	0.0484	0.0822	0.0000	298.4605	298.4605	0.0384	0.0000	299.4202
Maximum	2.0755	3.6747	3.4941	9.3400e-003	0.3744	0.1541	0.5285	0.1702	0.1449	0.2808	0.0000	841.5867	841.5867	0.0947	0.0000	843.9547

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					
2019	0.0940	0.5439	1.9371	4.3600e-003	0.2299	7.3200e-003	0.2373	0.0934	7.1600e-003	0.1005	0.0000	393.6465	393.6465	0.0731	0.0000	395.4738
2020	0.2277	1.4540	3.5742	9.3400e-003	0.3744	0.0131	0.3875	0.1010	0.0127	0.1137	0.0000	841.5863	841.5863	0.0947	0.0000	843.9543
2021	1.9947	0.4398	1.3721	3.3200e-003	0.1255	3.7100e-003	0.1292	0.0338	3.6200e-003	0.0374	0.0000	298.4604	298.4604	0.0384	0.0000	299.4201
Maximum	1.9947	1.4540	3.5742	9.3400e-003	0.3744	0.0131	0.3875	0.1010	0.0127	0.1137	0.0000	841.5863	841.5863	0.0947	0.0000	843.9543

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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	17.85	67.76	-2.21	0.00	16.38	92.57	37.03	25.20	92.28	58.68	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	7-1-2019	9-30-2019	1.7679	0.1759
2	10-1-2019	12-31-2019	1.1532	0.4672
3	1-1-2020	3-31-2020	1.0328	0.4237
4	4-1-2020	6-30-2020	1.0223	0.4131
5	7-1-2020	9-30-2020	1.0335	0.4177
6	10-1-2020	12-31-2020	1.0442	0.4283
7	1-1-2021	3-31-2021	0.9243	0.3852
8	4-1-2021	6-30-2021	1.8033	1.4602
9	7-1-2021	9-30-2021	0.6445	0.6371
		Highest	1.8033	1.4602

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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	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658
Energy	0.0129	0.1101	0.0479	7.0000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	406.0684	406.0684	0.0214	6.2500e-003	408.4655
Mobile	1.0980	6.1836	10.6570	0.0379	2.7958	0.0339	2.8296	0.7493	0.0318	0.7811	0.0000	3,488.5256	3,488.5256	0.1720	0.0000	3,492.8257
Stationary	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Waste						0.0000	0.0000		0.0000	0.0000	30.0305	0.0000	30.0305	1.7748	0.0000	74.3993
Water						0.0000	0.0000		0.0000	0.0000	6.1123	28.4055	34.5179	0.6297	0.0152	54.7973
Total	2.4385	6.3236	12.7271	0.0388	2.7958	0.0542	2.8499	0.7493	0.0521	0.8014	36.1428	3,927.2373	3,963.3801	2.6012	0.0215	4,034.8089

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658
Energy	0.0129	0.1101	0.0479	7.0000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	136.8310	136.8310	3.0900e-003	2.4700e-003	137.6436
Mobile	1.0980	6.1836	10.6570	0.0379	2.7958	0.0339	2.8296	0.7493	0.0318	0.7811	0.0000	3,488.5256	3,488.5256	0.1720	0.0000	3,492.8257
Stationary	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Waste						0.0000	0.0000		0.0000	0.0000	30.0305	0.0000	30.0305	1.7748	0.0000	74.3993
Water						0.0000	0.0000		0.0000	0.0000	6.1123	28.4055	34.5179	0.6297	0.0152	54.7973
Total	2.4385	6.3236	12.7271	0.0388	2.7958	0.0542	2.8499	0.7493	0.0521	0.8014	36.1428	3,657.9999	3,694.1427	2.5829	0.0177	3,763.9870

	ROG	NOx	CO	SO2	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	6.86	6.79	0.70	17.61	6.71

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/18/2019	5	14	
2	Grading	Grading	7/19/2019	9/16/2019	5	42	
3	Building Construction	Building Construction	9/17/2019	4/26/2021	5	420	
4	Architectural Coating	Architectural Coating	6/4/2021	7/13/2021	5	28	
5	Paving	Paving	4/27/2021	6/3/2021	5	28	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.31

Acres of Paving: 5.32

Residential Indoor: 502,540; Residential Outdoor: 167,513; Non-Residential Indoor: 33,915; Non-Residential Outdoor: 11,305; Striped Parking Area: 14,184 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	301.00	71.00	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	60.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					
Fugitive Dust					0.1265	0.0000	0.1265	0.0695	0.0000	0.0695	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0304	0.3190	0.1544	2.7000e-004		0.0167	0.0167		0.0154	0.0154	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1073
Total	0.0304	0.3190	0.1544	2.7000e-004	0.1265	0.0167	0.1432	0.0695	0.0154	0.0849	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1073

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3.2 Site Preparation - 2019

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	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407
Total	5.0000e-004	3.6000e-004	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407

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					0.0569	0.0000	0.0569	0.0313	0.0000	0.0313	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2600e-003	0.0141	0.1461	2.7000e-004		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1072
Total	3.2600e-003	0.0141	0.1461	2.7000e-004	0.0569	4.3000e-004	0.0573	0.0313	4.3000e-004	0.0317	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1072

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3.2 Site Preparation - 2019

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	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407
Total	5.0000e-004	3.6000e-004	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407

3.3 Grading - 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					
Fugitive Dust					0.1335	0.0000	0.1335	0.0703	0.0000	0.0703	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	1.1449	0.7009	1.3000e-003		0.0500	0.0500		0.0460	0.0460	0.0000	116.9728	116.9728	0.0370	0.0000	117.8980
Total	0.0995	1.1449	0.7009	1.3000e-003	0.1335	0.0500	0.1836	0.0703	0.0460	0.1163	0.0000	116.9728	116.9728	0.0370	0.0000	117.8980

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3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355
Total	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355

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					0.0601	0.0000	0.0601	0.0316	0.0000	0.0316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.0693	0.6930	1.3000e-003		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	116.9726	116.9726	0.0370	0.0000	117.8979
Total	0.0160	0.0693	0.6930	1.3000e-003	0.0601	2.1300e-003	0.0622	0.0316	2.1300e-003	0.0338	0.0000	116.9726	116.9726	0.0370	0.0000	117.8979

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3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355
Total	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355

3.4 Building Construction - 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	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3396	89.3396	0.0218	0.0000	89.8837
Total	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3396	89.3396	0.0218	0.0000	89.8837

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3.4 Building Construction - 2019

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	0.0146	0.3409	0.0970	7.8000e-004	0.0178	2.5200e-003	0.0203	5.1400e-003	2.4200e-003	7.5600e-003	0.0000	74.0110	74.0110	4.2800e-003	0.0000	74.1178
Worker	0.0455	0.0331	0.3221	9.4000e-004	0.0908	6.5000e-004	0.0915	0.0242	6.0000e-004	0.0248	0.0000	85.3320	85.3320	2.3600e-003	0.0000	85.3911
Total	0.0601	0.3740	0.4191	1.7200e-003	0.1086	3.1700e-003	0.1118	0.0293	3.0200e-003	0.0323	0.0000	159.3429	159.3429	6.6400e-003	0.0000	159.5089

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	0.0125	0.0849	0.6635	1.0200e-003		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	89.3395	89.3395	0.0218	0.0000	89.8836
Total	0.0125	0.0849	0.6635	1.0200e-003		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	89.3395	89.3395	0.0218	0.0000	89.8836

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3.4 Building Construction - 2019

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	0.0146	0.3409	0.0970	7.8000e-004	0.0178	2.5200e-003	0.0203	5.1400e-003	2.4200e-003	7.5600e-003	0.0000	74.0110	74.0110	4.2800e-003	0.0000	74.1178
Worker	0.0455	0.0331	0.3221	9.4000e-004	0.0908	6.5000e-004	0.0915	0.0242	6.0000e-004	0.0248	0.0000	85.3320	85.3320	2.3600e-003	0.0000	85.3911
Total	0.0601	0.3740	0.4191	1.7200e-003	0.1086	3.1700e-003	0.1118	0.0293	3.0200e-003	0.0323	0.0000	159.3429	159.3429	6.6400e-003	0.0000	159.5089

3.4 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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596

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3.4 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	0.0414	1.0605	0.2950	2.6700e-003	0.0613	5.5500e-003	0.0669	0.0177	5.3100e-003	0.0230	0.0000	253.3502	253.3502	0.0136	0.0000	253.6894
Worker	0.1434	0.1008	0.9920	3.1500e-003	0.3131	2.1800e-003	0.3153	0.0833	2.0100e-003	0.0853	0.0000	284.8274	284.8274	7.1300e-003	0.0000	285.0056
Total	0.1848	1.1613	1.2870	5.8200e-003	0.3744	7.7300e-003	0.3822	0.1010	7.3200e-003	0.1083	0.0000	538.1776	538.1776	0.0207	0.0000	538.6950

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	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592

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3.4 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	0.0414	1.0605	0.2950	2.6700e-003	0.0613	5.5500e-003	0.0669	0.0177	5.3100e-003	0.0230	0.0000	253.3502	253.3502	0.0136	0.0000	253.6894
Worker	0.1434	0.1008	0.9920	3.1500e-003	0.3131	2.1800e-003	0.3153	0.0833	2.0100e-003	0.0853	0.0000	284.8274	284.8274	7.1300e-003	0.0000	285.0056
Total	0.1848	1.1613	1.2870	5.8200e-003	0.3744	7.7300e-003	0.3822	0.1010	7.3200e-003	0.1083	0.0000	538.1776	538.1776	0.0207	0.0000	538.6950

3.4 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	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9713	94.9713	0.0229	0.0000	95.5441
Total	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9713	94.9713	0.0229	0.0000	95.5441

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3.4 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	0.0108	0.2988	0.0819	8.3000e-004	0.0192	7.3000e-004	0.0199	5.5500e-003	7.0000e-004	6.2500e-003	0.0000	78.5721	78.5721	4.0000e-003	0.0000	78.6721
Worker	0.0415	0.0282	0.2825	9.5000e-004	0.0980	6.6000e-004	0.0987	0.0261	6.1000e-004	0.0267	0.0000	85.9932	85.9932	1.9900e-003	0.0000	86.0431
Total	0.0523	0.3269	0.3644	1.7800e-003	0.1172	1.3900e-003	0.1186	0.0316	1.3100e-003	0.0329	0.0000	164.5653	164.5653	5.9900e-003	0.0000	164.7152

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	0.0134	0.0916	0.7159	1.1000e-003		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	94.9712	94.9712	0.0229	0.0000	95.5440
Total	0.0134	0.0916	0.7159	1.1000e-003		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	94.9712	94.9712	0.0229	0.0000	95.5440

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3.4 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	0.0108	0.2988	0.0819	8.3000e-004	0.0192	7.3000e-004	0.0199	5.5500e-003	7.0000e-004	6.2500e-003	0.0000	78.5721	78.5721	4.0000e-003	0.0000	78.6721
Worker	0.0415	0.0282	0.2825	9.5000e-004	0.0980	6.6000e-004	0.0987	0.0261	6.1000e-004	0.0267	0.0000	85.9932	85.9932	1.9900e-003	0.0000	86.0431
Total	0.0523	0.3269	0.3644	1.7800e-003	0.1172	1.3900e-003	0.1186	0.0316	1.3100e-003	0.0329	0.0000	164.5653	164.5653	5.9900e-003	0.0000	164.7152

3.5 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	1.9142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0600e-003	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807
Total	1.9172	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807

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3.5 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	2.8300e-003	1.9200e-003	0.0192	6.0000e-005	6.6700e-003	5.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.8532	5.8532	1.4000e-004	0.0000	5.8566
Total	2.8300e-003	1.9200e-003	0.0192	6.0000e-005	6.6700e-003	5.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.8532	5.8532	1.4000e-004	0.0000	5.8566

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	1.9142					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2000e-004	1.8000e-003	0.0257	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807
Total	1.9146	1.8000e-003	0.0257	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807

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3.5 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	2.8300e-003	1.9200e-003	0.0192	6.0000e-005	6.6700e-003	5.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.8532	5.8532	1.4000e-004	0.0000	5.8566
Total	2.8300e-003	1.9200e-003	0.0192	6.0000e-005	6.6700e-003	5.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.8532	5.8532	1.4000e-004	0.0000	5.8566

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	0.0176	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595
Paving	6.9700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0246	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595

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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	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642
Total	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642

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	3.9300e-003	0.0170	0.2421	3.2000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595
Paving	6.9700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.0170	0.2421	3.2000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595

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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	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642
Total	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0980	6.1836	10.6570	0.0379	2.7958	0.0339	2.8296	0.7493	0.0318	0.7811	0.0000	3,488.5256	3,488.5256	0.1720	0.0000	3,492.8257
Unmitigated	1.0980	6.1836	10.6570	0.0379	2.7958	0.0339	2.8296	0.7493	0.0318	0.7811	0.0000	3,488.5256	3,488.5256	0.1720	0.0000	3,492.8257

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,965.60	1,887.30	1733.40	4,437,317	4,437,317
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,155.86	2,045.07	993.94	3,040,097	3,040,097
Total	4,121.46	3,932.37	2,727.34	7,477,414	7,477,414

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053
Parking Lot	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053
Strip Mall	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.4923	9.4923	6.4000e-004	1.3000e-004	9.5482
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	278.7297	278.7297	0.0189	3.9200e-003	280.3701
NaturalGas Mitigated	0.0129	0.1101	0.0479	7.0000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	127.3387	127.3387	2.4400e-003	2.3300e-003	128.0954
NaturalGas Unmitigated	0.0129	0.1101	0.0479	7.0000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	127.3387	127.3387	2.4400e-003	2.3300e-003	128.0954

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.33265e+006	0.0126	0.1075	0.0457	6.9000e-004		8.6900e-003	8.6900e-003		8.6900e-003	8.6900e-003	0.0000	124.4792	124.4792	2.3900e-003	2.2800e-003	125.2189
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
Strip Mall	53585.7	2.9000e-004	2.6300e-003	2.2100e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8595	2.8595	5.0000e-005	5.0000e-005	2.8765
Total		0.0129	0.1101	0.0480	7.1000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	127.3387	127.3387	2.4400e-003	2.3300e-003	128.0954

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	2.33265e+006	0.0126	0.1075	0.0457	6.9000e-004		8.6900e-003	8.6900e-003		8.6900e-003	8.6900e-003	0.0000	124.4792	124.4792	2.3900e-003	2.2800e-003	125.2189
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
Strip Mall	53585.7	2.9000e-004	2.6300e-003	2.2100e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8595	2.8595	5.0000e-005	5.0000e-005	2.8765
Total		0.0129	0.1101	0.0480	7.1000e-004		8.8900e-003	8.8900e-003		8.8900e-003	8.8900e-003	0.0000	127.3387	127.3387	2.4400e-003	2.3300e-003	128.0954

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.11465e+006	215.8907	0.0147	3.0300e-003	217.1613
Parking Lot	82740	16.0254	1.0900e-003	2.3000e-004	16.1197
Strip Mall	241701	46.8136	3.1800e-003	6.6000e-004	47.0891
Total		278.7297	0.0189	3.9200e-003	280.3701

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	582450	112.8113	7.6600e-003	1.5900e-003	113.4752
Parking Lot	-332715	-64.4416	-0.0044	-0.0009	-64.8208
Strip Mall	-200726	-38.8774	-0.0026	-0.0006	-39.1062
Total		9.4923	6.4000e-004	1.3000e-004	9.5482

6.0 Area Detail

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6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658
Unmitigated	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1914					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0728					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0614	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658
Total	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1914					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0728					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0614	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658
Total	1.3256	0.0232	2.0148	1.1000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	3.2857	3.2857	3.2000e-003	0.0000	3.3658

7.0 Water Detail

7.1 Mitigation Measures Water

- Apply Water Conservation Strategy
- Use Reclaimed Water
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	34.5179	0.6297	0.0152	54.7973
Unmitigated	34.5179	0.6297	0.0152	54.7973

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	17.5916 / 11.0903	31.5355	0.5750	0.0139	50.0522
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.67478 / 1.02648	2.9824	0.0547	1.3200e-003	4.7451
Total		34.5179	0.6297	0.0152	54.7973

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	17.5916 / 11.0903	31.5355	0.5750	0.0139	50.0522
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.67478 / 1.02648	2.9824	0.0547	1.3200e-003	4.7451
Total		34.5179	0.6297	0.0152	54.7973

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.0305	1.7748	0.0000	74.3993
Unmitigated	30.0305	1.7748	0.0000	74.3993

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.74	4.8190	0.2848	0.0000	11.9389
Total		30.0305	1.7748	0.0000	74.3993

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	124.2	25.2115	1.4900	0.0000	62.4604
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.74	4.8190	0.2848	0.0000	11.9389
Total		30.0305	1.7748	0.0000	74.3993

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
Emergency Generator	1	1	50	50	0.73	Diesel

Boilers

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

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Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Total	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553

11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.00	1000sqft	0.11	5,000.00	0
Parking Lot	675.00	Space	6.07	270,000.00	0
Apartments Mid Rise	365.00	Dwelling Unit	9.61	365,000.00	1110

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	427	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - PG&E's default 2008 CO2 intensity factor updated to the most recent (2013) emission factor in PG&E (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Land Use - Based on Green Valley Mixed-Use Site Plan, and Project Matrix. Average household size in Fairfield is 3.04. The projects 365 units would house approximately 1,110 residents.

Construction Phase - CalEEMod Default Schedule

Trips and VMT -

Grading - Entire site is 13.31 acres. Material balanced on site.

Vehicle Trips - Trip generation based off Table 9 of the traffic study.

Woodstoves - No wood burning.

Energy Use -

Construction Off-road Equipment Mitigation - Fugitive dust mitigation reflects BAAQMD mitigation recommended for all construction projects.

Area Mitigation -

Energy Mitigation - Design features provided by applicants sustainable design feature memo. On-site energy based on 37,200 of roof used for solar panels, with each panel approximately 15sf, generating 320w each. Assumes 28.5 kwh/sf.

Water Mitigation - Design features provided by applicants sustainable design feature memo.

Stationary Sources - Emergency Generators and Fire Pumps -

Fleet Mix -

Area Coating -

Water And Wastewater -

Solid Waste -

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,500.00	11,305.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	7,500.00	33,915.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	246,375.00	167,513.00
tblArchitecturalCoating	ConstArea_Residential_Interior	739,125.00	502,540.00
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	54.75	0.00
tblFireplaces	NumberNoFireplace	14.60	10.80
tblFireplaces	NumberWood	62.05	0.00
tblGrading	AcresOfGrading	75.00	13.31
tblLandUse	Population	1,044.00	1,110.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblVehicleTrips	ST_TR	6.39	7.15
tblVehicleTrips	ST_TR	1.32	20.00
tblVehicleTrips	SU_TR	5.86	5.56
tblVehicleTrips	SU_TR	0.68	20.00
tblVehicleTrips	WD_TR	6.65	7.45
tblVehicleTrips	WD_TR	6.97	20.00
tblWoodstoves	NumberCatalytic	7.30	0.00
tblWoodstoves	NumberNoncatalytic	7.30	5.40
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2931	2.6859	2.0204	4.6500e-003	0.3968	0.1194	0.5162	0.1762	0.1110	0.2871	0.0000	419.8462	419.8462	0.0741	0.0000	421.6980
2020	0.4972	3.8153	3.7350	0.0103	0.4469	0.1552	0.6020	0.1204	0.1459	0.2664	0.0000	929.7482	929.7482	0.0977	0.0000	932.1917
2021	2.8559	1.2863	1.3711	3.6300e-003	0.1497	0.0518	0.2014	0.0403	0.0486	0.0889	0.0000	326.5805	326.5805	0.0393	0.0000	327.5626
Maximum	2.8559	3.8153	3.7350	0.0103	0.4469	0.1552	0.6020	0.1762	0.1459	0.2871	0.0000	929.7482	929.7482	0.0977	0.0000	932.1917

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					
2019	0.2931	2.6859	2.0204	4.6500e-003	0.2522	0.1194	0.3716	0.0991	0.1110	0.2101	0.0000	419.8459	419.8459	0.0741	0.0000	421.6977
2020	0.4972	3.8153	3.7350	0.0103	0.4469	0.1552	0.6020	0.1204	0.1459	0.2664	0.0000	929.7479	929.7479	0.0977	0.0000	932.1914
2021	2.8559	1.2863	1.3711	3.6300e-003	0.1497	0.0518	0.2014	0.0403	0.0486	0.0889	0.0000	326.5803	326.5803	0.0393	0.0000	327.5625
Maximum	2.8559	3.8153	3.7350	0.0103	0.4469	0.1552	0.6020	0.1204	0.1459	0.2664	0.0000	929.7479	929.7479	0.0977	0.0000	932.1914

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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	14.55	0.00	10.95	22.87	0.00	11.99	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	7-1-2019	9-30-2019	1.7753	1.7753
2	10-1-2019	12-31-2019	1.2036	1.2036
3	1-1-2020	3-31-2020	1.0777	1.0777
4	4-1-2020	6-30-2020	1.0653	1.0653
5	7-1-2020	9-30-2020	1.0770	1.0770
6	10-1-2020	12-31-2020	1.0895	1.0895
7	1-1-2021	3-31-2021	0.9642	0.9642
8	4-1-2021	6-30-2021	2.3465	2.3465
9	7-1-2021	9-30-2021	0.8987	0.8987
		Highest	2.3465	2.3465

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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	1.8098	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472
Energy	0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	493.4706	493.4706	0.0250	7.6800e-003	496.3848
Mobile	0.8145	4.6910	8.4723	0.0312	2.3587	0.0278	2.3865	0.6322	0.0261	0.6582	0.0000	2,872.4526	2,872.4526	0.1327	0.0000	2,875.7689
Stationary	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Waste						0.0000	0.0000		0.0000	0.0000	35.3407	0.0000	35.3407	2.0886	0.0000	87.5552
Water						0.0000	0.0000		0.0000	0.0000	7.9115	36.2984	44.2099	0.8151	0.0197	70.4559
Total	2.6441	4.8809	11.2694	0.0324	2.3587	0.0553	2.4140	0.6322	0.0536	0.6858	43.2522	3,407.6127	3,450.8650	3.0657	0.0274	3,535.6673

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8098	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472
Energy	0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	225.3458	225.3458	6.7600e-003	3.9200e-003	226.6820
Mobile	0.8145	4.6910	8.4723	0.0312	2.3587	0.0278	2.3865	0.6322	0.0261	0.6582	0.0000	2,872.4526	2,872.4526	0.1327	0.0000	2,875.7689
Stationary	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Waste						0.0000	0.0000		0.0000	0.0000	35.3407	0.0000	35.3407	2.0886	0.0000	87.5552
Water						0.0000	0.0000		0.0000	0.0000	7.9115	36.2984	44.2099	0.8151	0.0197	70.4559
Total	2.6441	4.8809	11.2694	0.0324	2.3587	0.0553	2.4140	0.6322	0.0536	0.6858	43.2522	3,139.4880	3,182.7402	3.0475	0.0236	3,265.9645

	ROG	NOx	CO	SO2	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	7.87	7.77	0.59	13.73	7.63

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/18/2019	5	10	
2	Grading	Grading	7/19/2019	9/16/2019	5	30	
3	Building Construction	Building Construction	9/17/2019	4/26/2021	5	300	
4	Paving	Paving	4/27/2021	6/3/2021	5	20	
5	Architectural Coating	Architectural Coating	6/4/2021	7/13/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.31

Acres of Paving: 6.07

Residential Indoor: 502,540; Residential Outdoor: 167,513; Non-Residential Indoor: 33,915; Non-Residential Outdoor: 11,305; Striped Parking Area: 14,184 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	364.00	79.00	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	73.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					
Fugitive Dust					0.1265	0.0000	0.1265	0.0695	0.0000	0.0695	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0304	0.3190	0.1544	2.7000e-004		0.0167	0.0167		0.0154	0.0154	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1073
Total	0.0304	0.3190	0.1544	2.7000e-004	0.1265	0.0167	0.1432	0.0695	0.0154	0.0849	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1073

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3.2 Site Preparation - 2019

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	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407
Total	5.0000e-004	3.6000e-004	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407

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					0.0569	0.0000	0.0569	0.0313	0.0000	0.0313	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0304	0.3190	0.1544	2.7000e-004		0.0167	0.0167		0.0154	0.0154	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1072
Total	0.0304	0.3190	0.1544	2.7000e-004	0.0569	0.0167	0.0736	0.0313	0.0154	0.0467	0.0000	23.9181	23.9181	7.5700e-003	0.0000	24.1072

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3.2 Site Preparation - 2019

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	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407
Total	5.0000e-004	3.6000e-004	3.5500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.9400	0.9400	3.0000e-005	0.0000	0.9407

3.3 Grading - 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					
Fugitive Dust					0.1363	0.0000	0.1363	0.0706	0.0000	0.0706	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	1.1449	0.7009	1.3000e-003		0.0500	0.0500		0.0460	0.0460	0.0000	116.9728	116.9728	0.0370	0.0000	117.8980
Total	0.0995	1.1449	0.7009	1.3000e-003	0.1363	0.0500	0.1864	0.0706	0.0460	0.1166	0.0000	116.9728	116.9728	0.0370	0.0000	117.8980

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3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355
Total	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355

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					0.0614	0.0000	0.0614	0.0318	0.0000	0.0318	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	1.1449	0.7009	1.3000e-003		0.0500	0.0500		0.0460	0.0460	0.0000	116.9726	116.9726	0.0370	0.0000	117.8979
Total	0.0995	1.1449	0.7009	1.3000e-003	0.0614	0.0500	0.1114	0.0318	0.0460	0.0778	0.0000	116.9726	116.9726	0.0370	0.0000	117.8979

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3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355
Total	1.6700e-003	1.2200e-003	0.0118	3.0000e-005	3.3400e-003	2.0000e-005	3.3600e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	3.1334	3.1334	9.0000e-005	0.0000	3.1355

3.4 Building Construction - 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	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3396	89.3396	0.0218	0.0000	89.8837
Total	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3396	89.3396	0.0218	0.0000	89.8837

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3.4 Building Construction - 2019

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	0.0163	0.3793	0.1079	8.7000e-004	0.0198	2.8100e-003	0.0226	5.7200e-003	2.6900e-003	8.4100e-003	0.0000	82.3502	82.3502	4.7600e-003	0.0000	82.4692
Worker	0.0550	0.0401	0.3895	1.1400e-003	0.1098	7.8000e-004	0.1106	0.0292	7.2000e-004	0.0299	0.0000	103.1922	103.1922	2.8600e-003	0.0000	103.2637
Total	0.0713	0.4194	0.4975	2.0100e-003	0.1296	3.5900e-003	0.1332	0.0349	3.4100e-003	0.0383	0.0000	185.5424	185.5424	7.6200e-003	0.0000	185.7328

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	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3395	89.3395	0.0218	0.0000	89.8836
Total	0.0897	0.8010	0.6522	1.0200e-003		0.0490	0.0490		0.0461	0.0461	0.0000	89.3395	89.3395	0.0218	0.0000	89.8836

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3.4 Building Construction - 2019

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	0.0163	0.3793	0.1079	8.7000e-004	0.0198	2.8100e-003	0.0226	5.7200e-003	2.6900e-003	8.4100e-003	0.0000	82.3502	82.3502	4.7600e-003	0.0000	82.4692
Worker	0.0550	0.0401	0.3895	1.1400e-003	0.1098	7.8000e-004	0.1106	0.0292	7.2000e-004	0.0299	0.0000	103.1922	103.1922	2.8600e-003	0.0000	103.2637
Total	0.0713	0.4194	0.4975	2.0100e-003	0.1296	3.5900e-003	0.1332	0.0349	3.4100e-003	0.0383	0.0000	185.5424	185.5424	7.6200e-003	0.0000	185.7328

3.4 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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596

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3.4 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	0.0460	1.1800	0.3282	2.9700e-003	0.0682	6.1800e-003	0.0744	0.0197	5.9100e-003	0.0256	0.0000	281.8967	281.8967	0.0151	0.0000	282.2741
Worker	0.1734	0.1219	1.1996	3.8100e-003	0.3787	2.6400e-003	0.3813	0.1007	2.4300e-003	0.1031	0.0000	344.4424	344.4424	8.6200e-003	0.0000	344.6580
Total	0.2195	1.3019	1.5278	6.7800e-003	0.4469	8.8200e-003	0.4557	0.1204	8.3400e-003	0.1288	0.0000	626.3392	626.3392	0.0237	0.0000	626.9321

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	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592

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3.4 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	0.0460	1.1800	0.3282	2.9700e-003	0.0682	6.1800e-003	0.0744	0.0197	5.9100e-003	0.0256	0.0000	281.8967	281.8967	0.0151	0.0000	282.2741
Worker	0.1734	0.1219	1.1996	3.8100e-003	0.3787	2.6400e-003	0.3813	0.1007	2.4300e-003	0.1031	0.0000	344.4424	344.4424	8.6200e-003	0.0000	344.6580
Total	0.2195	1.3019	1.5278	6.7800e-003	0.4469	8.8200e-003	0.4557	0.1204	8.3400e-003	0.1288	0.0000	626.3392	626.3392	0.0237	0.0000	626.9321

3.4 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	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9713	94.9713	0.0229	0.0000	95.5441
Total	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9713	94.9713	0.0229	0.0000	95.5441

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3.4 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	0.0120	0.3324	0.0911	9.2000e-004	0.0214	8.2000e-004	0.0222	6.1700e-003	7.8000e-004	6.9600e-003	0.0000	87.4253	87.4253	4.4500e-003	0.0000	87.5366
Worker	0.0502	0.0341	0.3416	1.1500e-003	0.1185	8.0000e-004	0.1193	0.0315	7.4000e-004	0.0323	0.0000	103.9918	103.9918	2.4100e-003	0.0000	104.0521
Total	0.0622	0.3665	0.4328	2.0700e-003	0.1399	1.6200e-003	0.1415	0.0377	1.5200e-003	0.0392	0.0000	191.4171	191.4171	6.8600e-003	0.0000	191.5887

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	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9712	94.9712	0.0229	0.0000	95.5440
Total	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9712	94.9712	0.0229	0.0000	95.5440

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3.4 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	0.0120	0.3324	0.0911	9.2000e-004	0.0214	8.2000e-004	0.0222	6.1700e-003	7.8000e-004	6.9600e-003	0.0000	87.4253	87.4253	4.4500e-003	0.0000	87.5366
Worker	0.0502	0.0341	0.3416	1.1500e-003	0.1185	8.0000e-004	0.1193	0.0315	7.4000e-004	0.0323	0.0000	103.9918	103.9918	2.4100e-003	0.0000	104.0521
Total	0.0622	0.3665	0.4328	2.0700e-003	0.1399	1.6200e-003	0.1415	0.0377	1.5200e-003	0.0392	0.0000	191.4171	191.4171	6.8600e-003	0.0000	191.5887

3.5 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	0.0176	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595
Paving	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0287	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595

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3.5 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	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642
Total	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642

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	0.0176	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595
Paving	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0287	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595

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3.5 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	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642
Total	7.1000e-004	4.8000e-004	4.8100e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4633	1.4633	3.0000e-005	0.0000	1.4642

3.6 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	2.6798					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0600e-003	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807
Total	2.6829	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807

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3.6 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	3.4400e-003	2.3300e-003	0.0234	8.0000e-005	8.1200e-003	5.0000e-005	8.1700e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	7.1214	7.1214	1.7000e-004	0.0000	7.1255
Total	3.4400e-003	2.3300e-003	0.0234	8.0000e-005	8.1200e-003	5.0000e-005	8.1700e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	7.1214	7.1214	1.7000e-004	0.0000	7.1255

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	2.6798					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0600e-003	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807
Total	2.6829	0.0214	0.0255	4.0000e-005		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	3.5746	3.5746	2.5000e-004	0.0000	3.5807

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3.6 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	3.4400e-003	2.3300e-003	0.0234	8.0000e-005	8.1200e-003	5.0000e-005	8.1700e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	7.1214	7.1214	1.7000e-004	0.0000	7.1255
Total	3.4400e-003	2.3300e-003	0.0234	8.0000e-005	8.1200e-003	5.0000e-005	8.1700e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	7.1214	7.1214	1.7000e-004	0.0000	7.1255

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8145	4.6910	8.4723	0.0312	2.3587	0.0278	2.3865	0.6322	0.0261	0.6582	0.0000	2,872.4526	2,872.4526	0.1327	0.0000	2,875.7689
Unmitigated	0.8145	4.6910	8.4723	0.0312	2.3587	0.0278	2.3865	0.6322	0.0261	0.6582	0.0000	2,872.4526	2,872.4526	0.1327	0.0000	2,875.7689

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,719.25	2,609.75	2029.40	6,016,659	6,016,659
General Light Industry	100.00	100.00	100.00	291,951	291,951
Parking Lot	0.00	0.00	0.00		
Total	2,819.25	2,709.75	2,129.40	6,308,610	6,308,610

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053
Apartments Mid Rise	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053
Parking Lot	0.584264	0.036754	0.174658	0.112986	0.019233	0.005457	0.009466	0.043414	0.003239	0.002257	0.006611	0.000609	0.001053

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.0297	50.0297	3.4000e-003	7.0000e-004	50.3241
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	318.1545	318.1545	0.0216	4.4700e-003	320.0269
NaturalGas Mitigated	0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3161	175.3161	3.3600e-003	3.2100e-003	176.3579
NaturalGas Unmitigated	0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3161	175.3161	3.3600e-003	3.2100e-003	176.3579

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.1534e+006	0.0170	0.1453	0.0618	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.2774	168.2774	3.2300e-003	3.0900e-003	169.2774
General Light Industry	131900	7.1000e-004	6.4700e-003	5.4300e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0387	7.0387	1.3000e-004	1.3000e-004	7.0805
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3161	175.3161	3.3600e-003	3.2200e-003	176.3579

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	3.1534e+006	0.0170	0.1453	0.0618	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.2774	168.2774	3.2300e-003	3.0900e-003	169.2774
General Light Industry	131900	7.1000e-004	6.4700e-003	5.4300e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0387	7.0387	1.3000e-004	1.3000e-004	7.0805
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0177	0.1518	0.0673	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.3161	175.3161	3.3600e-003	3.2200e-003	176.3579

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.50685e+006	291.8522	0.0198	4.1000e-003	293.5698
General Light Industry	41300	7.9992	5.4000e-004	1.1000e-004	8.0462
Parking Lot	94500	18.3031	1.2400e-003	2.6000e-004	18.4109
Total		318.1545	0.0216	4.4700e-003	320.0269

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	911731	176.5876	0.0120	2.4800e-003	177.6269
General Light Industry	-323650	-62.6858	-0.0043	-0.0009	-63.0547
Parking Lot	-329775	-63.8721	-0.0043	-0.0009	-64.2480
Total		50.0297	3.3900e-003	7.0000e-004	50.3241

6.0 Area Detail

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6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8098	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472
Unmitigated	1.8098	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2645					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4625					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0829	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472
Total	1.8099	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472

Green Valley II - Solano-San Francisco 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	0.2645					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4625					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0829	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472
Total	1.8099	0.0314	2.7223	1.4000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	4.4392	4.4392	4.3200e-003	0.0000	4.5472

7.0 Water Detail

7.1 Mitigation Measures Water

- Apply Water Conservation Strategy
- Use Reclaimed Water
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

Green Valley II - Solano-San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	44.2099	0.8151	0.0197	70.4559
Unmitigated	44.2099	0.8151	0.0197	70.4559

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	23.7812 / 14.9925	42.6313	0.7773	0.0188	67.6632
General Light Industry	1.15625 / 0	1.5786	0.0378	9.1000e-004	2.7928
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		44.2099	0.8151	0.0197	70.4559

Green Valley II - Solano-San Francisco 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	23.7812 / 14.9925	42.6313	0.7773	0.0188	67.6632
General Light Industry	1.15625 / 0	1.5786	0.0378	9.1000e-004	2.7928
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		44.2099	0.8151	0.0197	70.4559

8.0 Waste Detail

8.1 Mitigation Measures Waste

Green Valley II - Solano-San Francisco County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.3407	2.0886	0.0000	87.5552
Unmitigated	35.3407	2.0886	0.0000	87.5552

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	167.9	34.0822	2.0142	0.0000	84.4372
General Light Industry	6.2	1.2585	0.0744	0.0000	3.1180
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		35.3407	2.0886	0.0000	87.5552

Green Valley II - Solano-San Francisco County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	167.9	34.0822	2.0142	0.0000	84.4372
General Light Industry	6.2	1.2585	0.0744	0.0000	3.1180
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		35.3407	2.0886	0.0000	87.5552

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
Emergency Generator	1	1	50	50	0.73	Diesel

Boilers

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

Green Valley II - Solano-San Francisco County, Annual

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

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553
Total	2.0500e-003	6.6900e-003	7.4400e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9520	0.9520	1.3000e-004	0.0000	0.9553

11.0 Vegetation

Green Valley Alternative 1 Construction Unmitigated Yearly

Year	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	CO2e
2019	0.28	2.64	1.94	0.00	0.37	0.12	0.49	0.17	0.11	0.28	395
2020	0.46	3.67	3.49	0.01	0.37	0.15	0.53	0.10	0.14	0.25	844
2021	2.08	1.25	1.30	0.00	0.13	0.05	0.18	0.03	0.05	0.08	299

Green Valley Alternative 1 Construction Unmitigated Daily Average

Year	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
2019	1	10	7	0	1	0	2	1	0	1
2020	2	14	13	0	1	1	2	0	1	1
2021	8	5	5	0	0	0	1	0	0	0
Total Emissions	11	28	25	0	3	1	5	1	1	2

Green Valley Alternative 1 Operational Unmitigated Yearly

Source	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	CO2e
Area	1.3	0.0	2.0	0.0		0.0	0.0		0.0	0.0	3
Energy	0.0	0.1	0.0	0.0		0.0	0.0		0.0	0.0	138
Mobile	1.1	6.2	10.7	0.0	2.8	0.0	2.8	0.7	0.0	0.8	3493
Stationary	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	1
Waste											74
Water											55
Total	2.44	6.33	12.73	0.04	2.80	0.05	2.85	0.75	0.05	0.80	3764

Green Valley Alternative 1 Operational Unmitigated Daily Average

Source	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
Area	7.3	0.1	11.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Energy	0.1	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	6.0	33.9	58.4	0.2	15.3	0.2	15.5	4.1	0.2	4.3
Stationary	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.4	34.7	69.8	0.2	15.3	0.3	15.6	4.1	0.3	4.4

Green Valley Alternative 2 Construction Unmitigated Yearly

Year	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	CO2e
2019	0.3	2.7	2.0	0.0	0.4	0.1	0.5	0.2	0.1	0.3	422
2020	0.5	3.8	3.7	0.0	0.4	0.2	0.6	0.1	0.1	0.3	932
2021	2.9	1.3	1.4	0.0	0.1	0.1	0.2	0.0	0.0	0.1	328

Green Valley Alternative 2 Construction Unmitigated Daily Average

Year	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
2019	1.1	10.1	7.6	0.0	1.5	0.4	1.9	0.7	0.4	1.1
2020	1.9	14.3	14.0	0.0	1.7	0.6	2.3	0.5	0.5	1.0
2021	10.7	4.8	5.2	0.0	0.6	0.2	0.8	0.2	0.2	0.3
Total Emissions	13.7	29.3	26.8	0.1	3.7	1.2	5.0	1.3	1.1	2.4

Green Valley Alternative 2 Operational Unmitigated Yearly

Source	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5	CO2e
Area	1.8	0.0	2.7	0.0		0.0	0.0		0.0	0.0	5
Energy	0.0	0.2	0.1	0.0		0.0	0.0		0.0	0.0	227
Mobile	0.8	4.7	8.5	0.0	2.4	0.0	2.4	0.6	0.0	0.7	2876
Stationary	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	1
Waste						0.0	0.0		0.0	0.0	88
Water						0.0	0.0		0.0	0.0	70
Total	2.6	4.9	11.3	0.0	2.4	0.1	2.4	0.6	0.1	0.7	3266

Green Valley Alternative 2 Operational Unmitigated Daily Average

Source	ROG	Nox	CO	SO2	Fugitive PM10	Exhaust PM10	Total PM10	Fugitive PM2.5	Exhaust PM2.5	Total PM2.5
Area	9.9	0.2	14.9	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Energy	0.1	0.8	0.4	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Mobile	4.5	25.7	46.4	0.2	12.9	0.2	13.1	3.5	0.1	3.6
Stationary	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	14.5	26.7	61.7	0.2	12.9	0.3	13.2	3.5	0.3	3.8

California 2030 GHG Emissions, Population Projections, and GHG Service Population Target
Green Valley II
Fairfield, California

	Year 2020
Current BAAQMD Threshold (2020)	
Land Use Sectors Greenhouse Gas Emissions Target (MT CO ₂ e/year)	295,530,000
Population	44,135,923
Employment	20,194,661
California Service Population	64,330,584
SB 32 Goal (MT CO ₂ e/SP/yr)	4.59
Estimated 2030 Statewide Data	Year 2030
Land Use Sectors Greenhouse Gas Emissions Target (MT CO ₂ e/year - Emissions adjusted by AR4 GWP and reduction target for 2030)	178,979,059
Population	43,939,250
Employment	23,205,813
California Service Population	67,145,063
SB 32 Goal (MT CO ₂ e/SP/yr)	2.67
Estimated 2030 Bay Area Data	Year 2030
Land Use Sectors Greenhouse Gas Emissions Target (MT CO ₂ e/year) (CA x 19.68%)	35,214,227
Population	8,689,440
Employment	4,405,125
Bay Area Service Population	13,094,565
SB 32 Goal (MT CO ₂ e/SP/yr)	2.69
Estimated 2030 Fairfield Data	Year 2030
Land Use Sectors Greenhouse Gas Emissions Target (MT CO ₂ e/year) (CA x 0.26%)	458,649
Population	119,980
Employment	47,105
Fairfield Service Population	167,085
SB 32 Goal (MT CO ₂ e/SP/yr)	2.75

Supporting Data

	Year	Household Tons Per Year ¹	Tons CO ₂ ¹	Population ²	Employment ²	Service Population	Households ²	Persons Per Household ²	Emissions Compared to State
City of Fairfield	1990		1,443,893.28	79,693	37,015	116,708	25,707	3.10	0.26%
	2013	43.7	1,500,479.74	102,954		102,954	34,318	3	0.26%
	2018			116,884		116,884	39,092	2.99	
	2030			119,980	47,105	167,085	38,770	3.0	
California Average	1990		563,451,523.04	29,760,021	12,900,000	42,660,021	9,920,007	3	100.00%
	2013	45.7	585,533,297.07	38,433,249		38,433,249	12,811,083	3	100.00%
	2018			39,557,045		39,557,045	13,185,682	3	
	2030			43,939,250	23,205,813	67,145,063			
Bay Area Average	1990		110,859,392.50	6,023,577	3,085,634	9,109,211	2,239,248	2.69	19.68%
	2013	44.3	115,203,993.50	6,991,159		6,991,159	2,598,944	2.69	19.68%
	2018			7,753,023		7,753,023	2,882,165	2.69	
	2030			8,689,440	4,405,125	13,094,565	3,142,015	2.8	

CARB IPCC Data³

Year	Net Emissi	Percent 1990
1990	430.72	
2000	471.7	91%
2001	486.8	88%
2002	485.8	89%
2003	485.7	89%
2004	493.7	87%
2005	486.1	89%
2006	482.7	89%
2007	490.3	88%
2008	487.3	88%
2009	457.3	94%
2010	448.1	96%
2011	443.9	97%
2012	450.4	96%
2013	447.6	96%
2014	444.1	97%
2015	441.4	98%
2016	429.4	100%

- Note 1 Jones, Christopher; Kammen, Daniel. 2015. A Consumption-Based Greenhouse Gas Inventory of San Francisco Bay Area Neighborhoods, Cities and Counties: Prioritizing Climate Action for Different Locations
 Located at <https://coolclimate.org/inventory>
- Note 2 2030 City and Regional Data from <http://projections.planbayarea.org/>
 1990 Data from <http://www.bayareacensus.ca.gov/bayarea.htm>
 2013 Data from <http://www.baaqmd.gov/about-air-quality/research-and-data/emission-inventory/consumption-based-ghg-emissions-inventory>
 2018 Data from <https://www.census.gov/quickfacts/>
- Note 3 <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>
<https://ww3.arb.ca.gov/cc/inventory/1990level/1990level.htm>



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	8/23/2018
Contact Name	Jared Jerome
Affiliation	(Consultant)
Phone	626-564-1500
Email	jj@jaredjerome.com
Project Name	Green Valley II
Address	2015 Telegraph Avenue
City	Fairfield
County	Solano
commercial, mixed use, industrial, etc.)	Mixed-use
Project Size (# of units or building square feet)	270 DU/22,611SF Commercial
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.
2. Download and install the free program Google Earth, <http://www.google.com/earth/download/ge/>, and then download the county specific Google Earth stationary source application files from the District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.
3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.
4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.
5. List the stationary source information in **Table B** blue section only.
6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.
7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI ¹	Facility Name	Address	Plant No.	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments
1200	Kiewit	4650 Business Center Drive	19705	0.801	0.0014	0.001				
400	NBHQ LP	4500 Business Center Drive	18773	0	0	0				
1700	MV Transportation Inc	4620 W America Drive	20017	NA	NA	NA				

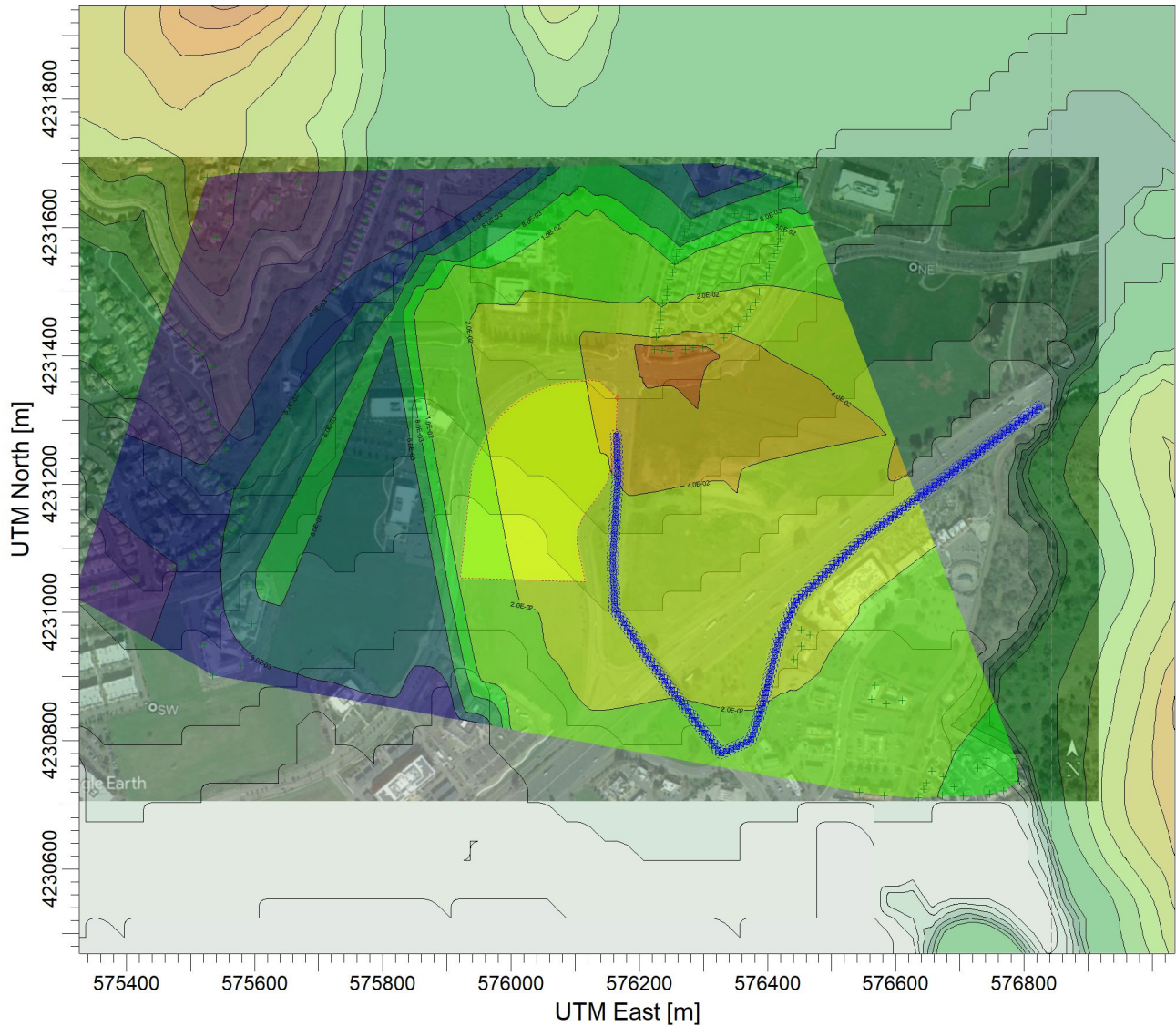
Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
 - a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier
 - b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic
 - c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
 - d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year
 - e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Multiplier worksheet.
 - f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
 - g. This spray booth is considered to be insignificant.

Date last updated:
03/13/2018

PROJECT TITLE:

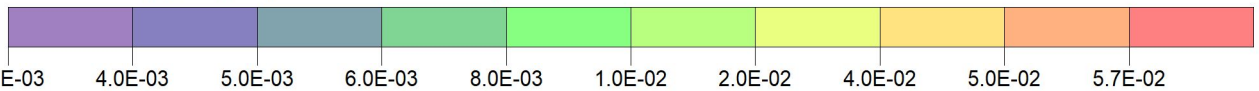
**Green Valley Construction Unmitigated
PM2.5 Annual Average**



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL

ug/m³

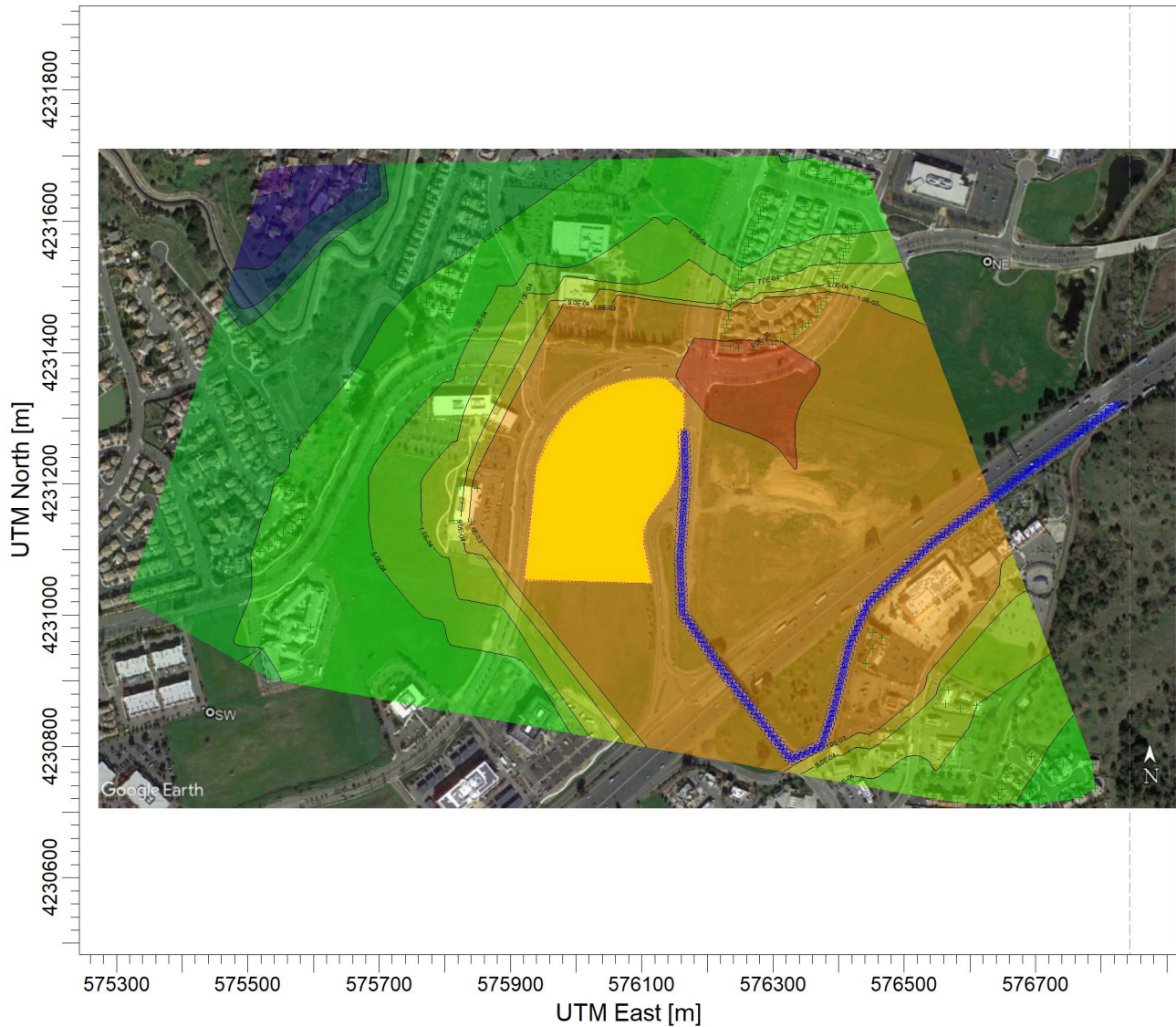
Max: 5.7E-02 [ug/m³] at (576248.05, 4231406.97)



COMMENTS:	SOURCES: 2	COMPANY NAME: Impact Sciences	
	RECEPTORS: 152		
	OUTPUT TYPE: Concentration	SCALE: 1:10,749	
	MAX: 5.7E-02 ug/m³	DATE: 9/17/2018	PROJECT NO.: 1328

PROJECT TITLE:

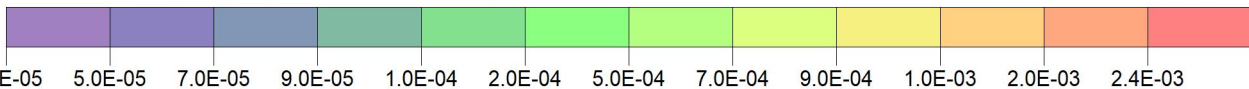
**Green Valley Construction Mitigated
PM2.5 Annual Average**



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL

ug/m³

Max: 2.4E-03 [ug/m³] at (576248.05, 4231406.97)



COMMENTS:

SOURCES:

COMPANY NAME:

2

Impact Sciences

RECEPTORS:

156

OUTPUT TYPE:

Concentration

SCALE:

1:10,515



MAX:

2.4E-03 ug/m³

DATE:

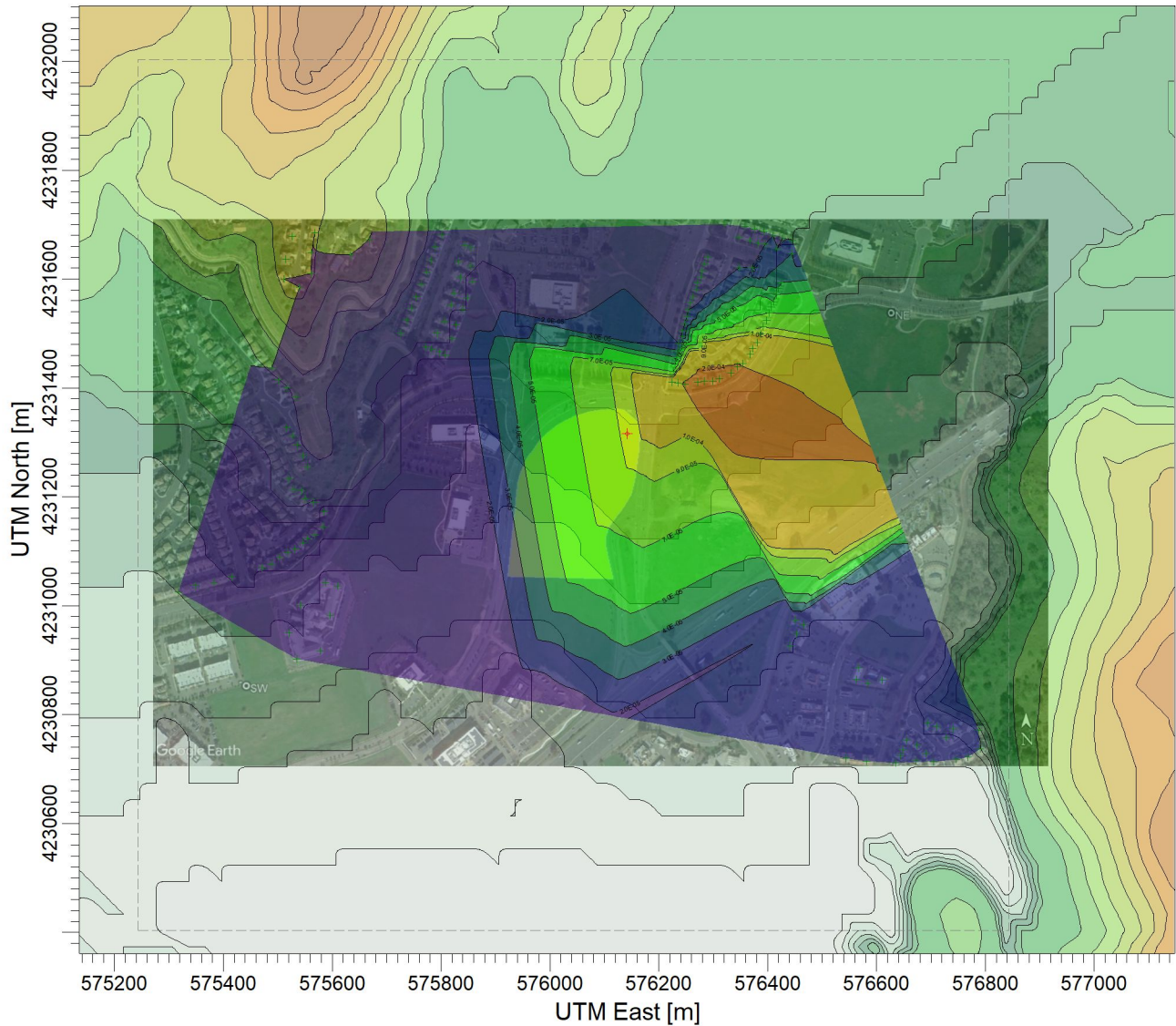
9/17/2018

PROJECT NO.:

1328

PROJECT TITLE:

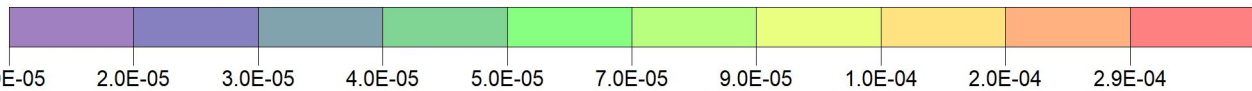
Green Valley Generator



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL

ug/m³

Max: 2.9E-04 [ug/m³] at (576299.02, 4231412.59)



COMMENTS:	SOURCES: 1	COMPANY NAME: Impact Sciences	
	RECEPTORS: 152		
	OUTPUT TYPE: Concentration	SCALE: 1:12,662	
	MAX: 2.9E-04 ug/m³	DATE: 9/17/2018	PROJECT NO.: 1328

Green Valley Construction Diesel Exhaust Calculations

	TPY PM2.5 Exhaust
Site Prep 2019 On-site Unmitigated	0.0154
Site Prep 2019 Off-site Unmitigated	1.00E-05
Site Prep 2019 On-site Mitigated	4.30E-04
Site Prep 2019 Off-site Mitigated	1.00E-05
Grading 2019 On-site Unmitigated	4.60E-02
Grading 2019 Off-site Unmitigated	2.00E-05
Grading 2019 On-site Mitigated	2.13E-03
Grading 2019 Off-site Mitigated	2.00E-05
Construction 2019 On-site Unmitigated	0.0461
Construction 2019 Off-site Unmitigated	3.02E-03
Construction 2019 On-site Mitigated	1.55E-03
Construction 2019 Off-site Mitigated	3.02E-03
Construction 2020 On-site Unmitigated	1.38E-01
Construction 2020 Off-site Unmitigated	7.32E-03
Construction 2020 On-site Mitigated	5.34E-03
Construction 2020 Off-site Mitigated	7.32E-03
Construction 2021 On-site Unmitigated	0.037
Construction 2021 Off-site Unmitigated	1.31E-03
Construction 2021 On-site Mitigated	1.67E-03
Construction 2021 Off-site Mitigated	1.31E-03
Paving 2021 On-site Unmitigated	8.73E-03
Paving 2021 Off-site Unmitigated	1.00E-05
Paving 2021 On-site Mitigated	5.20E-04
Paving 2021 Off-site Mitigated	1.00E-05
Coating 2021 On-site Unmitigated	1.32E-03
Coating 2021 Off-site Unmitigated	4.00E-05
Coating 2021 On-site Mitigated	6.00E-05
Coating 2021 Off-site Mitigated	4.00E-05

	TPY PM2.5 Exhaust	Lbs/Year	Grams/Year	Grams/Sec
2019 On-site Unmitigated	0.1075	215.0000	97522.28	0.00309202
2019 Off-site Unmitigated	0.0031	6.1000	2766.9112	0.00008773
2020 On-site Unmitigated	0.1376	275.2000	124828.5184	0.00395778
2020 Off-site Unmitigated	0.0073	14.6400	6640.58688	0.00021054
2021 On-site Unmitigated	0.0471	94.1000	42683.0072	0.00135330
2021 Off-site Unmitigated	0.0014	2.7200	1233.77024	0.00003912
2019 On-site Mitigated	0.0041	8.2200	3728.52624	0.00011822
2019 Off-site Mitigated	0.0031	6.1000	2766.9112	0.00008773
2020 On-site Mitigated	0.0053	10.6800	4844.36256	0.00015359
2020 Off-site Mitigated	0.0073	14.6400	6640.58688	0.00021054
2021 On-site Mitigated	0.0023	4.5000	2041.164	0.00006472
2021 Off-site Mitigated	0.0014	2.7200	1233.77024	0.00003912

	Grams/Second
Average On-Site Unmitigated	0.00280103
Average Off-Site Unmitigated	0.00000562
Average On-Site Mitigated	0.00011218
Average Off-Site Mitigated	0.00000562

Note - Off-site emissions adjusted to account for 1 mile of travel in project area.

PM2.5 Concentration (1 Hour)	1.29279
PM2.5 Concentration (Annual)	0.05689
Cancer Risk at MEIR	38.79
Chronic Risk	0.01
Mitigated PM2.5 Concentration (1 Hour)	0.05292
Mitigated PM2.5 Concentration (Annual)	0.00235
Mitigated Cancer Risk at MEIR	1.60
Mitigated Chronic Risk	<0.001

	TPY PM2.5 Exhaust	Lbs/Year	Grams/Year	Grams/Sec
Diesel Generator	0.0009	1.8200	825.53744	0.00002617
PM2.5 Concentration (Hourly)	0.00222			
PM2.5 Concentration (Annual)	0.000060			
Cancer Risk at MEIR	0.05			
Chronic Risk	<0.001			

