

APPENDIX C
AQ Modeling Data

CalEEMod Outputs

*Phase I Construction - Winter, Summer,
Annual*

Roberts Ranch - Phase 1 Construction
Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	6.80	Acre	6.80	296,208.00	0
City Park	3.27	Acre	3.27	142,441.20	0
Single Family Housing	275.00	Dwelling Unit	62.50	495,000.00	754

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	219,325.00	26,319.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	657,974.00	0.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	1,110.00	717.00

tblConstructionPhase	NumDays	110.00	71.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	40.00	26.00
tblLandUse	LotAcreage	89.29	62.50
tblLandUse	Population	787.00	754.00
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	23.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.8214	63.8782	60.6348	0.0927	18.2962	3.1073	20.6632	9.9917	2.8587	12.1694	0.0000	8,098.4654	8,098.4654	2.0572	0.0000	8,141.6656
2019	4.4296	30.0544	56.6239	0.0926	4.2207	1.4125	5.6332	1.1314	1.3257	2.4571	0.0000	7,910.0212	7,910.0212	0.8385	0.0000	7,927.6293
2020	4.0607	27.1071	54.3529	0.0926	4.2209	1.2296	5.4504	1.1315	1.1540	2.2855	0.0000	7,693.3302	7,693.3302	0.8202	0.0000	7,710.5550
2021	133.2357	24.2908	52.5451	0.0925	4.2212	1.0629	5.2840	1.1316	0.9974	2.1290	0.0000	7,637.0072	7,637.0072	0.8063	0.0000	7,653.9388
Total	147.5474	145.3304	224.1567	0.3704	30.9589	6.8122	37.0309	13.3861	6.3358	19.0409	0.0000	31,338.8240	31,338.8240	4.5221	0.0000	31,433.7887

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.8214	63.8782	60.6348	0.0927	18.2962	3.1073	20.6632	9.9917	2.8587	12.1694	0.0000	8,098.4654	8,098.4654	2.0572	0.0000	8,141.6656
2019	4.4296	30.0544	56.6239	0.0926	4.2207	1.4125	5.6332	1.1314	1.3257	2.4571	0.0000	7,910.0212	7,910.0212	0.8385	0.0000	7,927.6293
2020	4.0607	27.1071	54.3529	0.0926	4.2209	1.2296	5.4504	1.1315	1.1540	2.2855	0.0000	7,693.3302	7,693.3302	0.8202	0.0000	7,710.5550
2021	133.2357	24.2908	52.5451	0.0925	4.2212	1.0629	5.2840	1.1316	0.9974	2.1290	0.0000	7,637.0072	7,637.0072	0.8063	0.0000	7,653.9388
Total	147.5474	145.3304	224.1567	0.3704	30.9589	6.8122	37.0309	13.3861	6.3358	19.0409	0.0000	31,338.8240	31,338.8240	4.5221	0.0000	31,433.7887

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2018	7/6/2018	5	26	
2	Grading/Trenching	Grading	7/7/2018	10/15/2018	5	71	
3	Building Construction	Building Construction	10/16/2018	7/14/2021	5	717	
4	Paving	Paving	7/15/2021	9/20/2021	5	48	
5	Architectural Coating	Architectural Coating	9/21/2021	11/25/2021	5	48	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 26,319 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	283.00	101.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.773	3,939.7731	1.2265		3,965.529
Total	4.2921	45.6088	36.2346	0.0391	18.0663	2.3654	20.4317	9.9307	2.1762	12.1069		3,939.773	3,939.7731	1.2265		3,965.529
												1				7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.1542	1.2699	2.8000e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		215.5468	215.5468	0.0131		215.8225
Total	0.0609	0.1542	1.2699	2.8000e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		215.5468	215.5468	0.0131		215.8225

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	4.2921	45.6088	36.2346	0.0391	18.0663	2.3654	20.4317	9.9307	2.1762	12.1069	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0609	0.1542	1.2699	2.8000e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		215.5468	215.5468	0.0131		215.8225
Total	0.0609	0.1542	1.2699	2.8000e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		215.5468	215.5468	0.0131		215.8225

3.3 Grading/Trenching - 2018
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000				0.0000
Off-Road	5.7538	63.7069	45.0263	0.0652		3.1055	3.1055		2.8570	2.8570		6,561.1098	6,561.1098	2.0426			6,604.0037
Total	5.7538	63.7069	45.0263	0.0652	8.6733	3.1055	11.7788	3.5965	2.8570	6.4535		6,561.1098	6,561.1098	2.0426			6,604.0037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0677	0.1713	1.4110	3.1100e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		239.4964	239.4964	0.0146			239.8028
Total	0.0677	0.1713	1.4110	3.1100e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		239.4964	239.4964	0.0146			239.8028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.7538	63.7069	45.0263	0.0652		3.1055	3.1055		2.8570	2.8570	0.0000	6,561.1098	6,561.1098	2.0426		6,604.0037
Total	5.7538	63.7069	45.0263	0.0652	8.6733	3.1055	11.7788	3.5965	2.8570	6.4535	0.0000	6,561.1098	6,561.1098	2.0426		6,604.0037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0677	0.1713	1.4110	3.1100e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		239.4964	239.4964	0.0146		239.8028
Total	0.0677	0.1713	1.4110	3.1100e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		239.4964	239.4964	0.0146		239.8028

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4718	7.5474	23.1360	0.0218	0.6058	0.1101	0.7159	0.1727	0.1013	0.2740		2,099.6521	2,099.6521	0.0163		2,099.9946
Worker	0.9572	2.4235	19.9661	0.0440	3.6148	0.0259	3.6406	0.9586	0.0239	0.9825		3,388.8744	3,388.8744	0.2064		3,393.2094
Total	2.4290	9.9709	43.1021	0.0659	4.2206	0.1360	4.3566	1.1313	0.1252	1.2565		5,488.5265	5,488.5265	0.2227		5,493.2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4718	7.5474	23.1360	0.0218	0.6058	0.1101	0.7159	0.1727	0.1013	0.2740		2,099.6521	2,099.6521	0.0163		2,099.9946
Worker	0.9572	2.4235	19.9661	0.0440	3.6148	0.0259	3.6406	0.9586	0.0239	0.9825		3,388.8744	3,388.8744	0.2064		3,393.2094
Total	2.4290	9.9709	43.1021	0.0659	4.2206	0.1360	4.3566	1.1313	0.1252	1.2565		5,488.5265	5,488.5265	0.2227		5,493.2040

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	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	1.2254	6.8565	21.2831	0.0218	0.6060	0.1019	0.7078	0.1728	0.0937	0.2665		2,063.7064	2,063.7064	0.0159		2,064.0401
Worker	0.8526	2.2328	18.2205	0.0440	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,265.5530	3,265.5530	0.1947		3,269.6413
Total	2.0780	9.0893	39.5036	0.0658	4.2207	0.1274	4.3481	1.1314	0.1174	1.2488		5,329.2594	5,329.2594	0.2106		5,333.6814

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2254	6.8565	21.2831	0.0218	0.6060	0.1019	0.7078	0.1728	0.0937	0.2665		2,063.7064	2,063.7064	0.0159		2,064.0401
Worker	0.8526	2.2328	18.2205	0.0440	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,265.5530	3,265.5530	0.1947		3,269.6413
Total	2.0780	9.0893	39.5036	0.0658	4.2207	0.1274	4.3481	1.1314	0.1174	1.2488		5,329.2594	5,329.2594	0.2106		5,333.6814

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	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1680	5.9479	20.6749	0.0218	0.6061	0.0913	0.6974	0.1729	0.0840	0.2568		2,017.3055	2,017.3055	0.0154		2,017.6278
Worker	0.7815	2.0753	16.8697	0.0440	3.6148	0.0255	3.6402	0.9586	0.0236	0.9822		3,133.5448	3,133.5448	0.1855		3,137.4392
Total	1.9495	8.0232	37.5445	0.0658	4.2209	0.1167	4.3376	1.1315	0.1076	1.2390		5,150.8503	5,150.8503	0.2008		5,155.0670

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880

Total	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.479	2,542.4799	0.6194		2,555.488
												9				0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1680	5.9479	20.6749	0.0218	0.6061	0.0913	0.6974	0.1729	0.0840	0.2568		2,017.3055	2,017.3055	0.0154		2,017.6278
Worker	0.7815	2.0753	16.8697	0.0440	3.6148	0.0255	3.6402	0.9586	0.0236	0.9822		3,133.5448	3,133.5448	0.1855		3,137.4392
Total	1.9495	8.0232	37.5445	0.0658	4.2209	0.1167	4.3376	1.1315	0.1076	1.2390		5,150.8503	5,150.8503	0.2008		5,155.0670

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	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0884	4.9986	20.1092	0.0217	0.6064	0.0824	0.6888	0.1730	0.0759	0.2488		2,015.6567	2,015.6567	0.0153		2,015.9769
Worker	0.7391	1.9520	15.8983	0.0440	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,078.5688	3,078.5688	0.1784		3,082.3158
Total	1.8275	6.9506	36.0074	0.0657	4.2212	0.1080	4.3292	1.1316	0.0996	1.2311		5,094.2255	5,094.2255	0.1937		5,098.2926

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	1.0884	4.9986	20.1092	0.0217	0.6064	0.0824	0.6888	0.1730	0.0759	0.2488		2,015.6567	2,015.6567	0.0153		2,015.9769
Worker	0.7391	1.9520	15.8983	0.0440	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,078.5688	3,078.5688	0.1784		3,082.3158
Total	1.8275	6.9506	36.0074	0.0657	4.2212	0.1080	4.3292	1.1316	0.0996	1.2311		5,094.2255	5,094.2255	0.1937		5,098.2926

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	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.3712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6020	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0392	0.1035	0.8427	2.3300e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		163.1750	163.1750	9.4600e-003		163.3736
Total	0.0392	0.1035	0.8427	2.3300e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		163.1750	163.1750	9.4600e-003		163.3736

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120	0.0000	2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.3712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6020	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120	0.0000	2,160.2530	2,160.2530	0.6987		2,174.9250

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0392	0.1035	0.8427	2.3300e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		163.1750	163.1750	9.4600e-003		163.3736
Total	0.0392	0.1035	0.8427	2.3300e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		163.1750	163.1750	9.4600e-003		163.3736

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	lb/day										lb/day					
Archit. Coating	132.8679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	133.0868	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1489	0.3932	3.2021	8.8600e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		620.0651	620.0651	0.0359		620.8198
Total	0.1489	0.3932	3.2021	8.8600e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		620.0651	620.0651	0.0359		620.8198

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	132.8679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	133.0868	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1489	0.3932	3.2021	8.8600e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		620.0651	620.0651	0.0359		620.8198
Total	0.1489	0.3932	3.2021	8.8600e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		620.0651	620.0651	0.0359		620.8198

Roberts Ranch - Phase 1 Construction Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	6.80	Acre	6.80	296,208.00	0
City Park	3.27	Acre	3.27	142,441.20	0
Single Family Housing	275.00	Dwelling Unit	62.50	495,000.00	754

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	219,325.00	26,319.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	657,974.00	0.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	1,110.00	717.00

tblConstructionPhase	NumDays	110.00	71.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	40.00	26.00
tblLandUse	LotAcreage	89.29	62.50
tblLandUse	Population	787.00	754.00
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	23.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.8265	63.8409	52.2794	0.0980	18.2962	3.1073	20.6632	9.9917	2.8587	12.1694	0.0000	8,518.3983	8,518.3983	2.0572	0.0000	8,561.5984
2019	4.2102	29.1237	48.3625	0.0979	4.2207	1.4111	5.6318	1.1314	1.3244	2.4558	0.0000	8,315.4506	8,315.4506	0.8380	0.0000	8,333.0478
2020	3.8584	26.2746	46.2940	0.0979	4.2209	1.2284	5.4493	1.1315	1.1529	2.2844	0.0000	8,083.0967	8,083.0967	0.8197	0.0000	8,100.3103
2021	133.2497	23.5459	44.7301	0.0978	4.2212	1.0618	5.2830	1.1316	0.9964	2.1280	0.0000	8,020.5398	8,020.5398	0.8057	0.0000	8,037.4599
Total	147.1448	142.7851	191.6661	0.3915	30.9589	6.8086	37.0273	13.3861	6.3325	19.0376	0.0000	32,937.4853	32,937.4853	4.5205	0.0000	33,032.4165

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.8265	63.8409	52.2794	0.0980	18.2962	3.1073	20.6632	9.9917	2.8587	12.1694	0.0000	8,518.3983	8,518.3983	2.0572	0.0000	8,561.5984
2019	4.2102	29.1237	48.3625	0.0979	4.2207	1.4111	5.6318	1.1314	1.3244	2.4558	0.0000	8,315.4506	8,315.4506	0.8380	0.0000	8,333.0478
2020	3.8584	26.2746	46.2940	0.0979	4.2209	1.2284	5.4493	1.1315	1.1529	2.2844	0.0000	8,083.0967	8,083.0967	0.8197	0.0000	8,100.3103
2021	133.2497	23.5459	44.7301	0.0978	4.2212	1.0618	5.2830	1.1316	0.9964	2.1280	0.0000	8,020.5398	8,020.5398	0.8057	0.0000	8,037.4599
Total	147.1448	142.7851	191.6661	0.3915	30.9589	6.8086	37.0273	13.3861	6.3325	19.0376	0.0000	32,937.4853	32,937.4853	4.5205	0.0000	33,032.4165

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2018	7/6/2018	5	26	
2	Grading/Trenching	Grading	7/7/2018	10/15/2018	5	71	
3	Building Construction	Building Construction	10/16/2018	7/14/2021	5	717	
4	Paving	Paving	7/15/2021	9/20/2021	5	48	
5	Architectural Coating	Architectural Coating	9/21/2021	11/25/2021	5	48	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 26,319 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	283.00	101.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.773	3,939.7731	1.2265		3,965.5297
Total	4.2921	45.6088	36.2346	0.0391	18.0663	2.3654	20.4317	9.9307	2.1762	12.1069		3,939.773	3,939.7731	1.2265		3,965.5297

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0655	0.1206	1.4110	3.1400e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		241.1196	241.1196	0.0131		241.3953
Total	0.0655	0.1206	1.4110	3.1400e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		241.1196	241.1196	0.0131		241.3953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	4.2921	45.6088	36.2346	0.0391	18.0663	2.3654	20.4317	9.9307	2.1762	12.1069	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0655	0.1206	1.4110	3.1400e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		241.1196	241.1196	0.0131		241.3953
Total	0.0655	0.1206	1.4110	3.1400e-003	0.2299	1.6400e-003	0.2316	0.0610	1.5200e-003	0.0625		241.1196	241.1196	0.0131		241.3953

3.3 Grading/Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.7538	63.7069	45.0263	0.0652		3.1055	3.1055		2.8570	2.8570		6,561.1098	6,561.1098	2.0426		6,604.0037
Total	5.7538	63.7069	45.0263	0.0652	8.6733	3.1055	11.7788	3.5965	2.8570	6.4535		6,561.1098	6,561.1098	2.0426		6,604.0037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1340	1.5677	3.4800e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		267.9106	267.9106	0.0146		268.2170
Total	0.0728	0.1340	1.5677	3.4800e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		267.9106	267.9106	0.0146		268.2170

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.7538	63.7069	45.0263	0.0652		3.1055	3.1055		2.8570	2.8570	0.0000	6,561.1098	6,561.1098	2.0426		6,604.0037
Total	5.7538	63.7069	45.0263	0.0652	8.6733	3.1055	11.7788	3.5965	2.8570	6.4535	0.0000	6,561.1098	6,561.1098	2.0426		6,604.0037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0728	0.1340	1.5677	3.4800e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		267.9106	267.9106	0.0146		268.2170
Total	0.0728	0.1340	1.5677	3.4800e-003	0.2555	1.8300e-003	0.2573	0.0678	1.6900e-003	0.0694		267.9106	267.9106	0.0146		268.2170

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0953	7.0505	12.5634	0.0218	0.6058	0.1086	0.7144	0.1727	0.0999	0.2726		2,117.5239	2,117.5239	0.0158		2,117.8557
Worker	1.0295	1.8964	22.1833	0.0493	3.6148	0.0259	3.6406	0.9586	0.0239	0.9825		3,790.9354	3,790.9354	0.2064		3,795.2705
Total	2.1248	8.9470	34.7467	0.0712	4.2206	0.1345	4.3551	1.1313	0.1238	1.2551		5,908.4593	5,908.4593	0.2222		5,913.1261

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0953	7.0505	12.5634	0.0218	0.6058	0.1086	0.7144	0.1727	0.0999	0.2726		2,117.5239	2,117.5239	0.0158		2,117.8557
Worker	1.0295	1.8964	22.1833	0.0493	3.6148	0.0259	3.6406	0.9586	0.0239	0.9825		3,790.9354	3,790.9354	0.2064		3,795.2705
Total	2.1248	8.9470	34.7467	0.0712	4.2206	0.1345	4.3551	1.1313	0.1238	1.2551		5,908.4593	5,908.4593	0.2222		5,913.1261

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	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.9310	6.4109	10.8384	0.0218	0.6060	0.1005	0.7065	0.1728	0.0925	0.2652		2,081.3140	2,081.3140	0.0154		2,081.6368
Worker	0.9276	1.7478	20.4037	0.0493	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,653.3748	3,653.3748	0.1947		3,657.4631
Total	1.8585	8.1587	31.2422	0.0711	4.2207	0.1260	4.3468	1.1314	0.1161	1.2475		5,734.6889	5,734.6889	0.2101		5,739.0999

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9310	6.4109	10.8384	0.0218	0.6060	0.1005	0.7065	0.1728	0.0925	0.2652		2,081.3140	2,081.3140	0.0154		2,081.6368
Worker	0.9276	1.7478	20.4037	0.0493	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,653.3748	3,653.3748	0.1947		3,657.4631
Total	1.8585	8.1587	31.2422	0.0711	4.2207	0.1260	4.3468	1.1314	0.1161	1.2475		5,734.6889	5,734.6889	0.2101		5,739.0999

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	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8929	5.5646	10.4908	0.0218	0.6061	0.0901	0.6962	0.1729	0.0829	0.2557		2,034.5654	2,034.5654	0.0148		2,034.8766
Worker	0.8543	1.6260	18.9948	0.0493	3.6148	0.0255	3.6402	0.9586	0.0236	0.9822		3,506.0514	3,506.0514	0.1855		3,509.9457
Total	1.7472	7.1906	29.4856	0.0711	4.2209	0.1155	4.3364	1.1315	0.1065	1.2379		5,540.6167	5,540.6167	0.2003		5,544.8223

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880

Total	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.479	2,542.4799	0.6194		2,555.488
												9				0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8929	5.5646	10.4908	0.0218	0.6061	0.0901	0.6962	0.1729	0.0829	0.2557		2,034.5654	2,034.5654	0.0148		2,034.8766
Worker	0.8543	1.6260	18.9948	0.0493	3.6148	0.0255	3.6402	0.9586	0.0236	0.9822		3,506.0514	3,506.0514	0.1855		3,509.9457
Total	1.7472	7.1906	29.4856	0.0711	4.2209	0.1155	4.3364	1.1315	0.1065	1.2379		5,540.6167	5,540.6167	0.2003		5,544.8223

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	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8336	4.6753	10.2280	0.0217	0.6064	0.0814	0.6878	0.1730	0.0749	0.2479		2,032.9262	2,032.9262	0.0147		2,033.2350
Worker	0.8086	1.5304	17.9645	0.0493	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,444.8318	3,444.8318	0.1784		3,448.5788
Total	1.6422	6.2056	28.1925	0.0710	4.2212	0.1070	4.3281	1.1316	0.0986	1.2302		5,477.7581	5,477.7581	0.1931		5,481.8138

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.8336	4.6753	10.2280	0.0217	0.6064	0.0814	0.6878	0.1730	0.0749	0.2479		2,032.9262	2,032.9262	0.0147		2,033.2350
Worker	0.8086	1.5304	17.9645	0.0493	3.6148	0.0256	3.6403	0.9586	0.0237	0.9823		3,444.8318	3,444.8318	0.1784		3,448.5788
Total	1.6422	6.2056	28.1925	0.0710	4.2212	0.1070	4.3281	1.1316	0.0986	1.2302		5,477.7581	5,477.7581	0.1931		5,481.8138

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	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.3712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6020	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0811	0.9522	2.6100e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		182.5883	182.5883	9.4600e-003		182.7869
Total	0.0429	0.0811	0.9522	2.6100e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		182.5883	182.5883	9.4600e-003		182.7869

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120	0.0000	2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.3712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6020	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120	0.0000	2,160.2530	2,160.2530	0.6987		2,174.9250

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0429	0.0811	0.9522	2.6100e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		182.5883	182.5883	9.4600e-003		182.7869
Total	0.0429	0.0811	0.9522	2.6100e-003	0.1916	1.3600e-003	0.1930	0.0508	1.2600e-003	0.0521		182.5883	182.5883	9.4600e-003		182.7869

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	lb/day										lb/day					
Archit. Coating	132.8679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	133.0868	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1629	0.3082	3.6183	9.9300e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		693.8354	693.8354	0.0359		694.5901
Total	0.1629	0.3082	3.6183	9.9300e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		693.8354	693.8354	0.0359		694.5901

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	132.8679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	133.0868	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1629	0.3082	3.6183	9.9300e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		693.8354	693.8354	0.0359		694.5901
Total	0.1629	0.3082	3.6183	9.9300e-003	0.7281	5.1500e-003	0.7332	0.1931	4.7800e-003	0.1979		693.8354	693.8354	0.0359		694.5901

Roberts Ranch - Phase 1 Construction
Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	6.80	Acre	6.80	296,208.00	0
City Park	3.27	Acre	3.27	142,441.20	0
Single Family Housing	275.00	Dwelling Unit	62.50	495,000.00	754

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	219,325.00	26,319.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	657,974.00	0.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	1,110.00	717.00

tblConstructionPhase	NumDays	110.00	71.00
tblConstructionPhase	NumDays	75.00	48.00
tblConstructionPhase	NumDays	40.00	26.00
tblLandUse	LotAcreage	89.29	62.50
tblLandUse	Population	787.00	754.00
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	23.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3958	3.7639	3.6117	5.5500e-003	0.6667	0.1859	0.8526	0.2901	0.1719	0.4619	0.0000	472.4706	472.4706	0.1024	0.0000	474.6200
2019	0.5505	3.8713	6.5232	0.0122	0.5329	0.1842	0.7171	0.1432	0.1729	0.3162	0.0000	946.4571	946.4571	0.0992	0.0000	948.5409
2020	0.5065	3.5045	6.2821	0.0123	0.5349	0.1610	0.6959	0.1438	0.1511	0.2949	0.0000	923.9587	923.9587	0.0974	0.0000	926.0050
2021	3.4830	2.0166	3.7065	7.3800e-003	0.3052	0.0922	0.3974	0.0820	0.0864	0.1683	0.0000	557.1693	557.1693	0.0674	0.0000	558.5854
Total	4.9357	13.1563	20.1235	0.0374	2.0397	0.6233	2.6630	0.6591	0.5822	1.2413	0.0000	2,900.0557	2,900.0557	0.3665	0.0000	2,907.7513

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3958	3.7639	3.6117	5.5500e-003	0.6667	0.1859	0.8526	0.2901	0.1719	0.4619	0.0000	472.4702	472.4702	0.1024	0.0000	474.6196
2019	0.5505	3.8713	6.5232	0.0122	0.5329	0.1842	0.7171	0.1432	0.1729	0.3162	0.0000	946.4567	946.4567	0.0992	0.0000	948.5406
2020	0.5065	3.5045	6.2821	0.0123	0.5349	0.1610	0.6959	0.1438	0.1511	0.2949	0.0000	923.9584	923.9584	0.0974	0.0000	926.0046
2021	3.4830	2.0166	3.7065	7.3800e-003	0.3052	0.0922	0.3974	0.0820	0.0864	0.1683	0.0000	557.1690	557.1690	0.0674	0.0000	558.5852
Total	4.9357	13.1563	20.1235	0.0374	2.0397	0.6233	2.6630	0.6591	0.5822	1.2413	0.0000	2,900.0543	2,900.0543	0.3665	0.0000	2,907.7500

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2018	7/6/2018	5	26	
2	Grading/Trenching	Grading	7/7/2018	10/15/2018	5	71	
3	Building Construction	Building Construction	10/16/2018	7/14/2021	5	717	
4	Paving	Paving	7/15/2021	9/20/2021	5	48	
5	Architectural Coating	Architectural Coating	9/21/2021	11/25/2021	5	48	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,002,375; Residential Outdoor: 334,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 26,319 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	283.00	101.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2349	0.0000	0.2349	0.1291	0.0000	0.1291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0558	0.5929	0.4711	5.1000e-004		0.0308	0.0308		0.0283	0.0283	0.0000	46.4633	46.4633	0.0145	0.0000	46.7671
Total	0.0558	0.5929	0.4711	5.1000e-004	0.2349	0.0308	0.2656	0.1291	0.0283	0.1574	0.0000	46.4633	46.4633	0.0145	0.0000	46.7671

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
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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	7.6000e-004	1.7700e-003	0.0161	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5998	2.5998	1.5000e-004	0.0000	2.6031
Total	7.6000e-004	1.7700e-003	0.0161	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5998	2.5998	1.5000e-004	0.0000	2.6031

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					0.2349	0.0000	0.2349	0.1291	0.0000	0.1291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0558	0.5929	0.4711	5.1000e-004		0.0308	0.0308		0.0283	0.0283	0.0000	46.4633	46.4633	0.0145	0.0000	46.7670
Total	0.0558	0.5929	0.4711	5.1000e-004	0.2349	0.0308	0.2656	0.1291	0.0283	0.1574	0.0000	46.4633	46.4633	0.0145	0.0000	46.7670

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	7.6000e-004	1.7700e-003	0.0161	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5998	2.5998	1.5000e-004	0.0000	2.6031

Total	7.6000e-004	1.7700e-003	0.0161	4.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.5998	2.5998	1.5000e-004	0.0000	2.6031
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3.3 Grading/Trenching - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3079	0.0000	0.3079	0.1277	0.0000	0.1277	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2043	2.2616	1.5984	2.3100e-003		0.1102	0.1102		0.1014	0.1014	0.0000	211.3009	211.3009	0.0658	0.0000	212.6823
Total	0.2043	2.2616	1.5984	2.3100e-003	0.3079	0.1102	0.4181	0.1277	0.1014	0.2291	0.0000	211.3009	211.3009	0.0658	0.0000	212.6823

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-003	5.3800e-003	0.0487	1.1000e-004	8.7700e-003	6.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.8884	7.8884	4.7000e-004	0.0000	7.8982
Total	2.3000e-003	5.3800e-003	0.0487	1.1000e-004	8.7700e-003	6.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.8884	7.8884	4.7000e-004	0.0000	7.8982

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					0.3079	0.0000	0.3079	0.1277	0.0000	0.1277	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2043	2.2616	1.5984	2.3100e-003		0.1102	0.1102		0.1014	0.1014	0.0000	211.3007	211.3007	0.0658	0.0000	212.6821
Total	0.2043	2.2616	1.5984	2.3100e-003	0.3079	0.1102	0.4181	0.1277	0.1014	0.2291	0.0000	211.3007	211.3007	0.0658	0.0000	212.6821

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-003	5.3800e-003	0.0487	1.1000e-004	8.7700e-003	6.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.8884	7.8884	4.7000e-004	0.0000	7.8982
Total	2.3000e-003	5.3800e-003	0.0487	1.1000e-004	8.7700e-003	6.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.8884	7.8884	4.7000e-004	0.0000	7.8982

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0734	0.6397	0.4822	7.4000e-004		0.0411	0.0411		0.0386	0.0386	0.0000	65.1117	65.1117	0.0159	0.0000	65.4463
Total	0.0734	0.6397	0.4822	7.4000e-004		0.0411	0.0411		0.0386	0.0386	0.0000	65.1117	65.1117	0.0159	0.0000	65.4463

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	0.0340	0.2035	0.4613	6.0000e-004	0.0162	3.0000e-003	0.0192	4.6400e-003	2.7600e-003	7.4000e-003	0.0000	52.6398	52.6398	4.0000e-004	0.0000	52.6482
Worker	0.0253	0.0590	0.5340	1.2400e-003	0.0961	7.1000e-004	0.0968	0.0256	6.6000e-004	0.0262	0.0000	86.4666	86.4666	5.1500e-003	0.0000	86.5748
Total	0.0593	0.2625	0.9953	1.8400e-003	0.1123	3.7100e-003	0.1160	0.0302	3.4200e-003	0.0336	0.0000	139.1065	139.1065	5.5500e-003	0.0000	139.2230

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	0.0734	0.6397	0.4822	7.4000e-004		0.0411	0.0411		0.0386	0.0386	0.0000	65.1116	65.1116	0.0159	0.0000	65.4462
Total	0.0734	0.6397	0.4822	7.4000e-004		0.0411	0.0411		0.0386	0.0386	0.0000	65.1116	65.1116	0.0159	0.0000	65.4462

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	0.0340	0.2035	0.4613	6.0000e-004	0.0162	3.0000e-003	0.0192	4.6400e-003	2.7600e-003	7.4000e-003	0.0000	52.6398	52.6398	4.0000e-004	0.0000	52.6482
Worker	0.0253	0.0590	0.5340	1.2400e-003	0.0961	7.1000e-004	0.0968	0.0256	6.6000e-004	0.0262	0.0000	86.4666	86.4666	5.1500e-003	0.0000	86.5748
Total	0.0593	0.2625	0.9953	1.8400e-003	0.1123	3.7100e-003	0.1160	0.0302	3.4200e-003	0.0336	0.0000	139.1065	139.1065	5.5500e-003	0.0000	139.2230

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	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913

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	0.1363	0.8774	1.9670	2.8400e-003	0.0769	0.0132	0.0901	0.0220	0.0121	0.0341	0.0000	245.5263	245.5263	1.8500e-003	0.0000	245.5651

Worker	0.1073	0.2580	2.3220	5.8700e-003	0.4560	3.3300e-003	0.4593	0.1212	3.0900e-003	0.1243	0.0000	395.4006	395.4006	0.0231	0.0000	395.8846
Total	0.2436	1.1354	4.2890	8.7100e-003	0.5329	0.0165	0.5494	0.1433	0.0152	0.1585	0.0000	640.9269	640.9269	0.0249	0.0000	641.4496

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	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909

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	0.1363	0.8774	1.9670	2.8400e-003	0.0769	0.0132	0.0901	0.0220	0.0121	0.0341	0.0000	245.5263	245.5263	1.8500e-003	0.0000	245.5651
Worker	0.1073	0.2580	2.3220	5.8700e-003	0.4560	3.3300e-003	0.4593	0.1212	3.0900e-003	0.1243	0.0000	395.4006	395.4006	0.0231	0.0000	395.8846
Total	0.2436	1.1354	4.2890	8.7100e-003	0.5329	0.0165	0.5494	0.1433	0.0152	0.1585	0.0000	640.9269	640.9269	0.0249	0.0000	641.4496

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	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1514	302.1514	0.0736	0.0000	303.6973
Total	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1514	302.1514	0.0736	0.0000	303.6973

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	0.1308	0.7638	1.9162	2.8500e-003	0.0772	0.0119	0.0891	0.0221	0.0109	0.0330	0.0000	240.9287	240.9287	1.7900e-003	0.0000	240.9662
Worker	0.0990	0.2408	2.1640	5.9000e-003	0.4577	3.3300e-003	0.4611	0.1217	3.0900e-003	0.1248	0.0000	380.8787	380.8787	0.0220	0.0000	381.3415
Total	0.2299	1.0046	4.0802	8.7500e-003	0.5349	0.0152	0.5501	0.1438	0.0140	0.1578	0.0000	621.8074	621.8074	0.0238	0.0000	622.3077

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	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1510	302.1510	0.0736	0.0000	303.6969

Total	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1510	302.1510	0.0736	0.0000	303.6969
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1308	0.7638	1.9162	2.8500e-003	0.0772	0.0119	0.0891	0.0221	0.0109	0.0330	0.0000	240.9287	240.9287	1.7900e-003	0.0000	240.9662
Worker	0.0990	0.2408	2.1640	5.9000e-003	0.4577	3.3300e-003	0.4611	0.1217	3.0900e-003	0.1248	0.0000	380.8787	380.8787	0.0220	0.0000	381.3415
Total	0.2299	1.0046	4.0802	8.7500e-003	0.5349	0.0152	0.5501	0.1438	0.0140	0.1578	0.0000	621.8074	621.8074	0.0238	0.0000	622.3077

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	0.1316	1.2052	1.1494	1.8600e-003		0.0664	0.0664		0.0624	0.0624	0.0000	160.3207	160.3207	0.0386	0.0000	161.1318
Total	0.1316	1.2052	1.1494	1.8600e-003		0.0664	0.0664		0.0624	0.0624	0.0000	160.3207	160.3207	0.0386	0.0000	161.1318

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	0.0648	0.3402	0.9901	1.5100e-003	0.0410	5.6900e-003	0.0467	0.0117	5.2300e-003	0.0170	0.0000	127.7174	127.7174	9.4000e-004	0.0000	127.7371
Worker	0.0497	0.1202	1.0837	3.1300e-003	0.2429	1.7800e-003	0.2446	0.0646	1.6500e-003	0.0662	0.0000	198.5276	198.5276	0.0113	0.0000	198.7638
Total	0.1145	0.4604	2.0738	4.6400e-003	0.2838	7.4700e-003	0.2913	0.0763	6.8800e-003	0.0832	0.0000	326.2449	326.2449	0.0122	0.0000	326.5009

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	0.1316	1.2052	1.1494	1.8600e-003		0.0664	0.0664		0.0624	0.0624	0.0000	160.3205	160.3205	0.0386	0.0000	161.1316
Total	0.1316	1.2052	1.1494	1.8600e-003		0.0664	0.0664		0.0624	0.0624	0.0000	160.3205	160.3205	0.0386	0.0000	161.1316

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	0.0648	0.3402	0.9901	1.5100e-003	0.0410	5.6900e-003	0.0467	0.0117	5.2300e-003	0.0170	0.0000	127.7174	127.7174	9.4000e-004	0.0000	127.7371
Worker	0.0497	0.1202	1.0837	3.1300e-003	0.2429	1.7800e-003	0.2446	0.0646	1.6500e-003	0.0662	0.0000	198.5276	198.5276	0.0113	0.0000	198.7638
Total	0.1145	0.4604	2.0738	4.6400e-003	0.2838	7.4700e-003	0.2913	0.0763	6.8800e-003	0.0832	0.0000	326.2449	326.2449	0.0122	0.0000	326.5009

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	0.0295	0.3039	0.3445	5.4000e-004		0.0160	0.0160		0.0147	0.0147	0.0000	47.0340	47.0340	0.0152	0.0000	47.3534
Paving	8.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0385	0.3039	0.3445	5.4000e-004		0.0160	0.0160		0.0147	0.0147	0.0000	47.0340	47.0340	0.0152	0.0000	47.3534

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	9.1000e-004	2.2000e-003	0.0198	6.0000e-005	4.4400e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.6337	3.6337	2.1000e-004	0.0000	3.6381
Total	9.1000e-004	2.2000e-003	0.0198	6.0000e-005	4.4400e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.6337	3.6337	2.1000e-004	0.0000	3.6381

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	0.0295	0.3039	0.3445	5.4000e-004		0.0160	0.0160		0.0147	0.0147	0.0000	47.0339	47.0339	0.0152	0.0000	47.3534
Paving	8.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0385	0.3039	0.3445	5.4000e-004		0.0160	0.0160		0.0147	0.0147	0.0000	47.0339	47.0339	0.0152	0.0000	47.3534

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	9.1000e-004	2.2000e-003	0.0198	6.0000e-005	4.4400e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.6337	3.6337	2.1000e-004	0.0000	3.6381
Total	9.1000e-004	2.2000e-003	0.0198	6.0000e-005	4.4400e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.6337	3.6337	2.1000e-004	0.0000	3.6381

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	3.1888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	5.2500e-003	0.0366	0.0436	7.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	6.1278	6.1278	4.2000e-004	0.0000	6.1366
Total	3.1941	0.0366	0.0436	7.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	6.1278	6.1278	4.2000e-004	0.0000	6.1366

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	3.4600e-003	8.3600e-003	0.0754	2.2000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6100e-003	0.0000	13.8082	13.8082	7.8000e-004	0.0000	13.8246
Total	3.4600e-003	8.3600e-003	0.0754	2.2000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6100e-003	0.0000	13.8082	13.8082	7.8000e-004	0.0000	13.8246

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	3.1888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2500e-003	0.0366	0.0436	7.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	6.1278	6.1278	4.2000e-004	0.0000	6.1366
Total	3.1941	0.0366	0.0436	7.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	6.1278	6.1278	4.2000e-004	0.0000	6.1366

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	3.4600e-003	8.3600e-003	0.0754	2.2000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6100e-003	0.0000	13.8082	13.8082	7.8000e-004	0.0000	13.8246
Total	3.4600e-003	8.3600e-003	0.0754	2.2000e-004	0.0169	1.2000e-004	0.0170	4.4900e-003	1.1000e-004	4.6100e-003	0.0000	13.8082	13.8082	7.8000e-004	0.0000	13.8246

CalEEMod Outputs

***Phase 2 Construction - Winter, Summer,
Annual***

Roberts Ranch - Phase 2 Construction Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.07	Acre	5.07	220,849.20	0
City Park	27.49	Acre	27.49	1,197,464.40	0
Single Family Housing	205.00	Dwelling Unit	46.59	369,000.00	562

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Includes all active open space area in this phase. Population assumes 2.74 people per household

Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase

Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Off-road Equipment - Added a trencher to grading phase to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	709,157.00	85,099.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,127,470.00	0.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	1,550.00	530.00

tblConstructionPhase	NumDays	155.00	53.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	60.00	21.00
tblLandUse	LotAcreage	66.56	46.59
tblLandUse	Population	586.00	562.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6487	48.2716	40.7364	0.0688	18.2962	2.2790	19.9973	9.9917	2.0967	11.5567	0.0000	6,566.2991	6,566.2991	2.0573	0.0000	6,609.5015
2022	6.0287	42.0624	100.9398	0.1854	10.0706	1.9763	11.1402	3.6744	1.8182	5.4926	0.0000	14,770.0859	14,770.0859	2.0586	0.0000	14,813.3163
2023	5.6564	28.6171	97.4189	0.1853	10.0712	0.9482	11.0194	2.7015	0.8875	3.5890	0.0000	14,661.6099	14,661.6099	1.0362	0.0000	14,683.3706
2024	137.5736	27.3418	94.4877	0.1853	10.0717	0.8631	10.9348	2.7018	0.8072	3.5089	0.0000	14,570.0877	14,570.0877	1.0219	0.0000	14,591.5470
Total	153.9073	146.2928	333.5828	0.6248	48.5096	6.0665	53.0918	19.0693	5.6095	24.1473	0.0000	50,568.0825	50,568.0825	6.1739	0.0000	50,697.7353

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6487	48.2716	40.7364	0.0688	18.2962	2.2790	19.9973	9.9917	2.0967	11.5567	0.0000	6,566.2991	6,566.2991	2.0573	0.0000	6,609.5015
2022	6.0287	42.0624	100.9398	0.1854	10.0706	1.9763	11.1402	3.6744	1.8182	5.4926	0.0000	14,770.0859	14,770.0859	2.0586	0.0000	14,813.3163
2023	5.6564	28.6171	97.4189	0.1853	10.0712	0.9482	11.0194	2.7015	0.8875	3.5890	0.0000	14,661.6099	14,661.6099	1.0362	0.0000	14,683.3706
2024	137.5736	27.3418	94.4877	0.1853	10.0717	0.8631	10.9348	2.7018	0.8072	3.5089	0.0000	14,570.0877	14,570.0877	1.0219	0.0000	14,591.5470
Total	153.9073	146.2928	333.5828	0.6248	48.5096	6.0665	53.0918	19.0693	5.6095	24.1473	0.0000	50,568.0825	50,568.0825	6.1739	0.0000	50,697.7353

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/26/2021	12/24/2021	5	21	
2	Grading/Trenching	Grading	12/25/2021	3/9/2022	5	53	
3	Building Construction	Building Construction	3/10/2022	3/20/2024	5	530	
4	Paving	Paving	3/21/2024	5/13/2024	5	38	
5	Architectural Coating	Architectural Coating	5/14/2024	7/4/2024	5	38	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 747,225; Residential Outdoor: 249,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 85,099 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	254.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0470	0.1242	1.0112	2.8000e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		195.8100	195.8100	0.0114		196.0484
Total	0.0470	0.1242	1.0112	2.8000e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		195.8100	195.8100	0.0114		196.0484

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0470	0.1242	1.0112	2.8000e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		195.8100	195.8100	0.0114		196.0484
Total	0.0470	0.1242	1.0112	2.8000e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		195.8100	195.8100	0.0114		196.0484

3.3 Grading/Trenching - 2021
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000				0.0000
Off-Road	4.5886	48.1129	39.4444	0.0652		2.2769	2.2769		2.0947	2.0947		6,316.0974	6,316.0974	2.0428			6,358.9952
Total	4.5886	48.1129	39.4444	0.0652	8.6733	2.2769	10.9502	3.5965	2.0947	5.6912		6,316.0974	6,316.0974	2.0428			6,358.9952

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.1586	1.2921	3.5800e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		250.2017	250.2017	0.0145		250.5062
Total	0.0601	0.1586	1.2921	3.5800e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		250.2017	250.2017	0.0145		250.5062

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.5886	48.1129	39.4444	0.0652		2.2769	2.2769		2.0947	2.0947	0.0000	6,316.0974	6,316.0974	2.0428		6,358.9952
Total	4.5886	48.1129	39.4444	0.0652	8.6733	2.2769	10.9502	3.5965	2.0947	5.6912	0.0000	6,316.0974	6,316.0974	2.0428		6,358.9952

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.1586	1.2921	3.5800e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		250.2017	250.2017	0.0145		250.5062
Total	0.0601	0.1586	1.2921	3.5800e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		250.2017	250.2017	0.0145		250.5062

3.3 Grading/Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000

Off-Road	4.1394	41.9125	37.7746	0.0653		1.9742	1.9742		1.8163	1.8163		6,321.7572	6,321.7572	2.0446		6,364.6935
Total	4.1394	41.9125	37.7746	0.0653	8.6733	1.9742	10.6475	3.5965	1.8163	5.4128		6,321.7572	6,321.7572	2.0446		6,364.6935

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0569	0.1499	1.2213	3.5800e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		246.1668	246.1668	0.0140		246.4609
Total	0.0569	0.1499	1.2213	3.5800e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		246.1668	246.1668	0.0140		246.4609

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1394	41.9125	37.7746	0.0653		1.9742	1.9742		1.8163	1.8163	0.0000	6,321.7572	6,321.7572	2.0446		6,364.6935
Total	4.1394	41.9125	37.7746	0.0653	8.6733	1.9742	10.6475	3.5965	1.8163	5.4128	0.0000	6,321.7572	6,321.7572	2.0446		6,364.6935

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0569	0.1499	1.2213	3.5800e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		246.1668	246.1668	0.0140		246.4609
Total	0.0569	0.1499	1.2213	3.5800e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		246.1668	246.1668	0.0140		246.4609

3.4 Building Construction - 2022
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	2.6734	11.2430	49.0892	0.0546	1.5254	0.2032	1.7286	0.4352	0.1870	0.6221		5,066.0940	5,066.0940	0.0389		5,066.9111
Worker	1.6561	4.3602	35.5231	0.1040	8.5452	0.0608	8.6059	2.2661	0.0564	2.3224		7,160.2422	7,160.2422	0.4074		7,168.7980
Total	4.3295	15.6032	84.6122	0.1586	10.0706	0.2640	10.3345	2.7013	0.2433	2.9446		12,226.3362	12,226.3362	0.4463		12,235.7091

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.6734	11.2430	49.0892	0.0546	1.5254	0.2032	1.7286	0.4352	0.1870	0.6221		5,066.0940	5,066.0940	0.0389		5,066.9111
Worker	1.6561	4.3602	35.5231	0.1040	8.5452	0.0608	8.6059	2.2661	0.0564	2.3224		7,160.2422	7,160.2422	0.4074		7,168.7980
Total	4.3295	15.6032	84.6122	0.1586	10.0706	0.2640	10.3345	2.7013	0.2433	2.9446		12,226.3362	12,226.3362	0.4463		12,235.7091

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5184	10.1682	47.5711	0.0545	1.5260	0.1904	1.7164	0.4354	0.1752	0.6106		5,062.2283	5,062.2283	0.0369		5,063.0039
Worker	1.5718	4.1363	33.6385	0.1040	8.5452	0.0611	8.6062	2.2661	0.0566	2.3227		7,054.7553	7,054.7553	0.3949		7,063.0475
Total	4.0903	14.3045	81.2096	0.1585	10.0712	0.2515	10.3227	2.7015	0.2318	2.9334		12,116.9837	12,116.9837	0.4318		12,126.0515

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
												2				1

Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5184	10.1682	47.5711	0.0545	1.5260	0.1904	1.7164	0.4354	0.1752	0.6106		5,062.2283	5,062.2283	0.0369		5,063.0039
Worker	1.5718	4.1363	33.6385	0.1040	8.5452	0.0611	8.6062	2.2661	0.0566	2.3227		7,054.7553	7,054.7553	0.3949		7,063.0475
Total	4.0903	14.3045	81.2096	0.1585	10.0712	0.2515	10.3227	2.7015	0.2318	2.9334		12,116.9837	12,116.9837	0.4318		12,126.0515

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.4216	10.0213	46.2487	0.0545	1.5266	0.1911	1.7176	0.4357	0.1758	0.6115		5,064.5736	5,064.5736	0.0371		5,065.3520
Worker	1.5010	3.9431	32.1058	0.1040	8.5452	0.0615	8.6066	2.2661	0.0570	2.3231		6,960.3986	6,960.3986	0.3839		6,968.4601
Total	3.9226	13.9644	78.3545	0.1585	10.0717	0.2526	10.3243	2.7018	0.2328	2.9346		12,024.9722	12,024.9722	0.4210		12,033.8121

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	2.4216	10.0213	46.2487	0.0545	1.5266	0.1911	1.7176	0.4357	0.1758	0.6115		5,064.5736	5,064.5736	0.0371		5,065.3520
Worker	1.5010	3.9431	32.1058	0.1040	8.5452	0.0615	8.6066	2.2661	0.0570	2.3231		6,960.3986	6,960.3986	0.3839		6,968.4601
Total	3.9226	13.9644	78.3545	0.1585	10.0717	0.2526	10.3243	2.7018	0.2328	2.9346		12,024.9722	12,024.9722	0.4210		12,033.8121

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9690	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233		2,160.5812	2,160.5812	0.6988		2,175.2555
Paving	0.3496					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3186	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233		2,160.5812	2,160.5812	0.6988		2,175.2555

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0337	0.0884	0.7199	2.3300e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		156.0628	156.0628	8.6100e-003		156.2435
Total	0.0337	0.0884	0.7199	2.3300e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		156.0628	156.0628	8.6100e-003		156.2435

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9690	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233	0.0000	2,160.5812	2,160.5812	0.6988		2,175.2555
Paving	0.3496					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3186	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233	0.0000	2,160.5812	2,160.5812	0.6988		2,175.2555

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0337	0.0884	0.7199	2.3300e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		156.0628	156.0628	8.6100e-003		156.2435
Total	0.0337	0.0884	0.7199	2.3300e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		156.0628	156.0628	8.6100e-003		156.2435

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	137.0921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	137.2729	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3007	0.7898	6.4308	0.0208	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,394.1606	1,394.1606	0.0769		1,395.7753
Total	0.3007	0.7898	6.4308	0.0208	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,394.1606	1,394.1606	0.0769		1,395.7753

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	137.0921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	137.2729	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3007	0.7898	6.4308	0.0208	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,394.1606	1,394.1606	0.0769		1,395.7753
Total	0.3007	0.7898	6.4308	0.0208	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,394.1606	1,394.1606	0.0769		1,395.7753

Roberts Ranch - Phase 2 Construction Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.07	Acre	5.07	220,849.20	0
City Park	27.49	Acre	27.49	1,197,464.40	0
Single Family Housing	205.00	Dwelling Unit	46.59	369,000.00	562

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Includes all active open space area in this phase. Population assumes 2.74 people per household

Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase

Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Off-road Equipment - Added a trencher to grading phase to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	709,157.00	85,099.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,127,470.00	0.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	1,550.00	530.00

tblConstructionPhase	NumDays	155.00	53.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	60.00	21.00
tblLandUse	LotAcreage	66.56	46.59
tblLandUse	Population	586.00	562.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6544	48.2373	40.9044	0.0692	18.2962	2.2790	19.9973	9.9917	2.0967	11.5567	0.0000	6,596.0661	6,596.0661	2.0573	0.0000	6,639.2684
2022	5.5779	42.0301	81.6249	0.1980	10.0706	1.9763	11.1377	3.6744	1.8182	5.4926	0.0000	15,666.1349	15,666.1349	2.0586	0.0000	15,709.3653
2023	5.2349	27.0819	78.7604	0.1979	10.0712	0.9464	11.0176	2.7015	0.8858	3.5873	0.0000	15,546.0219	15,546.0219	1.0348	0.0000	15,567.7535
2024	137.6020	25.8676	76.4823	0.1979	10.0717	0.8613	10.9330	2.7018	0.8055	3.5073	0.0000	15,444.1250	15,444.1250	1.0205	0.0000	15,465.5551
Total	153.0691	143.2168	277.7720	0.6630	48.5096	6.0629	53.0856	19.0693	5.6062	24.1439	0.0000	53,252.3479	53,252.3479	6.1712	0.0000	53,381.9423

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6544	48.2373	40.9044	0.0692	18.2962	2.2790	19.9973	9.9917	2.0967	11.5567	0.0000	6,596.0661	6,596.0661	2.0573	0.0000	6,639.2684
2022	5.5779	42.0301	81.6249	0.1980	10.0706	1.9763	11.1377	3.6744	1.8182	5.4926	0.0000	15,666.1349	15,666.1349	2.0586	0.0000	15,709.3653
2023	5.2349	27.0819	78.7604	0.1979	10.0712	0.9464	11.0176	2.7015	0.8858	3.5873	0.0000	15,546.0219	15,546.0219	1.0348	0.0000	15,567.7535
2024	137.6020	25.8676	76.4823	0.1979	10.0717	0.8613	10.9330	2.7018	0.8055	3.5073	0.0000	15,444.1250	15,444.1250	1.0205	0.0000	15,465.5551
Total	153.0691	143.2168	277.7720	0.6630	48.5096	6.0629	53.0856	19.0693	5.6062	24.1439	0.0000	53,252.3479	53,252.3479	6.1712	0.0000	53,381.9423

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/26/2021	12/24/2021	5	21	
2	Grading/Trenching	Grading	12/25/2021	3/9/2022	5	53	
3	Building Construction	Building Construction	3/10/2022	3/20/2024	5	530	
4	Paving	Paving	3/21/2024	5/13/2024	5	38	
5	Architectural Coating	Architectural Coating	5/14/2024	7/4/2024	5	38	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 747,225; Residential Outdoor: 249,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 85,099 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	254.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0514	0.0973	1.1426	3.1300e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		219.1059	219.1059	0.0114		219.3442
Total	0.0514	0.0973	1.1426	3.1300e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		219.1059	219.1059	0.0114		219.3442

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0514	0.0973	1.1426	3.1300e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		219.1059	219.1059	0.0114		219.3442
Total	0.0514	0.0973	1.1426	3.1300e-003	0.2299	1.6300e-003	0.2315	0.0610	1.5100e-003	0.0625		219.1059	219.1059	0.0114		219.3442

3.3 Grading/Trenching - 2021
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.5886	48.1129	39.4444	0.0652		2.2769	2.2769		2.0947	2.0947		6,316.0974	6,316.0974	2.0428		6,358.9952
Total	4.5886	48.1129	39.4444	0.0652	8.6733	2.2769	10.9502	3.5965	2.0947	5.6912		6,316.0974	6,316.0974	2.0428		6,358.9952

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.1244	1.4600	4.0100e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		279.9687	279.9687	0.0145		280.2732
Total	0.0657	0.1244	1.4600	4.0100e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		279.9687	279.9687	0.0145		280.2732

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.5886	48.1129	39.4444	0.0652		2.2769	2.2769		2.0947	2.0947	0.0000	6,316.0974	6,316.0974	2.0428		6,358.9952
Total	4.5886	48.1129	39.4444	0.0652	8.6733	2.2769	10.9502	3.5965	2.0947	5.6912	0.0000	6,316.0974	6,316.0974	2.0428		6,358.9952

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.1244	1.4600	4.0100e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		279.9687	279.9687	0.0145		280.2732
Total	0.0657	0.1244	1.4600	4.0100e-003	0.2938	2.0800e-003	0.2959	0.0779	1.9300e-003	0.0798		279.9687	279.9687	0.0145		280.2732

3.3 Grading/Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000

Off-Road	4.1394	41.9125	37.7746	0.0653		1.9742	1.9742		1.8163	1.8163		6,321.7572	6,321.7572	2.0446		6,364.6935
Total	4.1394	41.9125	37.7746	0.0653	8.6733	1.9742	10.6475	3.5965	1.8163	5.4128		6,321.7572	6,321.7572	2.0446		6,364.6935

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.1176	1.3850	4.0100e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		275.4796	275.4796	0.0140		275.7738
Total	0.0623	0.1176	1.3850	4.0100e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		275.4796	275.4796	0.0140		275.7738

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1394	41.9125	37.7746	0.0653		1.9742	1.9742		1.8163	1.8163	0.0000	6,321.7572	6,321.7572	2.0446		6,364.6935
Total	4.1394	41.9125	37.7746	0.0653	8.6733	1.9742	10.6475	3.5965	1.8163	5.4128	0.0000	6,321.7572	6,321.7572	2.0446		6,364.6935

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.1176	1.3850	4.0100e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		275.4796	275.4796	0.0140		275.7738
Total	0.0623	0.1176	1.3850	4.0100e-003	0.2938	2.0900e-003	0.2959	0.0779	1.9400e-003	0.0798		275.4796	275.4796	0.0140		275.7738

3.4 Building Construction - 2022
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	2.0663	10.5179	25.0128	0.0546	1.5254	0.2007	1.7261	0.4352	0.1846	0.6198		5,109.5214	5,109.5214	0.0375		5,110.3088
Worker	1.8124	3.4208	40.2845	0.1165	8.5452	0.0608	8.6059	2.2661	0.0564	2.3224		8,012.8638	8,012.8638	0.4074		8,021.4196
Total	3.8787	13.9386	65.2973	0.1712	10.0706	0.2614	10.3320	2.7013	0.2410	2.9423		13,122.3852	13,122.3852	0.4449		13,131.7284

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.0663	10.5179	25.0128	0.0546	1.5254	0.2007	1.7261	0.4352	0.1846	0.6198		5,109.5214	5,109.5214	0.0375		5,110.3088
Worker	1.8124	3.4208	40.2845	0.1165	8.5452	0.0608	8.6059	2.2661	0.0564	2.3224		8,012.8638	8,012.8638	0.4074		8,021.4196
Total	3.8787	13.9386	65.2973	0.1712	10.0706	0.2614	10.3320	2.7013	0.2410	2.9423		13,122.3852	13,122.3852	0.4449		13,131.7284

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.9481	9.5215	24.2597	0.0546	1.5260	0.1886	1.7146	0.4354	0.1735	0.6090		5,105.7504	5,105.7504	0.0356		5,106.4969
Worker	1.7207	3.2478	38.2914	0.1165	8.5452	0.0611	8.6062	2.2661	0.0566	2.3227		7,895.6453	7,895.6453	0.3949		7,903.9375
Total	3.6688	12.7693	62.5511	0.1711	10.0712	0.2497	10.3208	2.7015	0.2302	2.9317		13,001.3957	13,001.3957	0.4304		13,010.4344

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
												2				1

Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.9481	9.5215	24.2597	0.0546	1.5260	0.1886	1.7146	0.4354	0.1735	0.6090		5,105.7504	5,105.7504	0.0356		5,106.4969
Worker	1.7207	3.2478	38.2914	0.1165	8.5452	0.0611	8.6062	2.2661	0.0566	2.3227		7,895.6453	7,895.6453	0.3949		7,903.9375
Total	3.6688	12.7693	62.5511	0.1711	10.0712	0.2497	10.3208	2.7015	0.2302	2.9317		13,001.3957	13,001.3957	0.4304		13,010.4344

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8855	9.3919	23.6900	0.0546	1.5266	0.1893	1.7158	0.4357	0.1741	0.6098		5,108.1065	5,108.1065	0.0357		5,108.8556
Worker	1.6430	3.0982	36.6591	0.1165	8.5452	0.0615	8.6066	2.2661	0.0570	2.3231		7,790.9031	7,790.9031	0.3839		7,798.9645
Total	3.5285	12.4902	60.3491	0.1711	10.0717	0.2507	10.3225	2.7018	0.2312	2.9329		12,899.0095	12,899.0095	0.4196		12,907.8202

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	1.8855	9.3919	23.6900	0.0546	1.5266	0.1893	1.7158	0.4357	0.1741	0.6098		5,108.1065	5,108.1065	0.0357		5,108.8556
Worker	1.6430	3.0982	36.6591	0.1165	8.5452	0.0615	8.6066	2.2661	0.0570	2.3231		7,790.9031	7,790.9031	0.3839		7,798.9645
Total	3.5285	12.4902	60.3491	0.1711	10.0717	0.2507	10.3225	2.7018	0.2312	2.9329		12,899.0095	12,899.0095	0.4196		12,907.8202

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9690	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233		2,160.5812	2,160.5812	0.6988		2,175.2555
Paving	0.3496					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3186	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233		2,160.5812	2,160.5812	0.6988		2,175.2555

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0695	0.8220	2.6100e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		174.6839	174.6839	8.6100e-003		174.8647
Total	0.0368	0.0695	0.8220	2.6100e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		174.6839	174.6839	8.6100e-003		174.8647

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9690	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233	0.0000	2,160.5812	2,160.5812	0.6988		2,175.2555
Paving	0.3496					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3186	9.3453	14.3254	0.0223		0.4601	0.4601		0.4233	0.4233	0.0000	2,160.5812	2,160.5812	0.6988		2,175.2555

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0368	0.0695	0.8220	2.6100e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		174.6839	174.6839	8.6100e-003		174.8647
Total	0.0368	0.0695	0.8220	2.6100e-003	0.1916	1.3800e-003	0.1930	0.0508	1.2800e-003	0.0521		174.6839	174.6839	8.6100e-003		174.8647

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	137.0921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	137.2729	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3291	0.6206	7.3428	0.0233	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,560.5097	1,560.5097	0.0769		1,562.1244
Total	0.3291	0.6206	7.3428	0.0233	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,560.5097	1,560.5097	0.0769		1,562.1244

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	137.0921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	137.2729	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3291	0.6206	7.3428	0.0233	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,560.5097	1,560.5097	0.0769		1,562.1244
Total	0.3291	0.6206	7.3428	0.0233	1.7116	0.0123	1.7239	0.4539	0.0114	0.4653		1,560.5097	1,560.5097	0.0769		1,562.1244

Roberts Ranch - Phase 2 Construction Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.07	Acre	5.07	220,849.20	0
City Park	27.49	Acre	27.49	1,197,464.40	0
Single Family Housing	205.00	Dwelling Unit	46.59	369,000.00	562

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Includes all active open space area in this phase. Population assumes 2.74 people per household

Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase

Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Off-road Equipment - Added a trencher to grading phase to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	709,157.00	85,099.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,127,470.00	0.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	1,550.00	530.00

tblConstructionPhase	NumDays	155.00	53.00
tblConstructionPhase	NumDays	110.00	38.00
tblConstructionPhase	NumDays	60.00	21.00
tblLandUse	LotAcreage	66.56	46.59
tblLandUse	Population	586.00	562.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0479	0.4893	0.4361	6.1000e-004	0.4226	0.0236	0.4461	0.2004	0.0217	0.2221	0.0000	52.9013	52.9013	0.0165	0.0000	53.2467
2022	0.6947	4.2321	10.0554	0.0216	1.2694	0.1607	1.4301	0.3749	0.1497	0.5246	0.0000	1,581.5727	1,581.5727	0.1462	0.0000	1,584.6425
2023	0.6836	3.6311	10.7997	0.0244	1.2667	0.1231	1.3898	0.3408	0.1153	0.4560	0.0000	1,751.0860	1,751.0860	0.1221	0.0000	1,753.6503
2024	2.7848	0.9894	2.7799	6.3800e-003	0.3175	0.0352	0.3527	0.0853	0.0328	0.1181	0.0000	457.5904	457.5904	0.0407	0.0000	458.4442
Total	4.2109	9.3419	24.0711	0.0530	3.2762	0.3425	3.6187	1.0014	0.3194	1.3208	0.0000	3,843.1505	3,843.1505	0.3254	0.0000	3,849.9836

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					
2021	0.0479	0.4893	0.4361	6.1000e-004	0.4226	0.0236	0.4461	0.2004	0.0217	0.2221	0.0000	52.9013	52.9013	0.0165	0.0000	53.2466
2022	0.6947	4.2321	10.0554	0.0216	1.2694	0.1607	1.4301	0.3749	0.1497	0.5246	0.0000	1,581.5723	1,581.5723	0.1462	0.0000	1,584.6420
2023	0.6836	3.6311	10.7997	0.0244	1.2667	0.1231	1.3898	0.3408	0.1153	0.4560	0.0000	1,751.0856	1,751.0856	0.1221	0.0000	1,753.6500
2024	2.7848	0.9894	2.7799	6.3800e-003	0.3175	0.0352	0.3527	0.0853	0.0328	0.1181	0.0000	457.5903	457.5903	0.0407	0.0000	458.4440
Total	4.2109	9.3419	24.0711	0.0530	3.2762	0.3425	3.6187	1.0014	0.3194	1.3208	0.0000	3,843.1495	3,843.1495	0.3254	0.0000	3,849.9826

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/26/2021	12/24/2021	5	21	
2	Grading/Trenching	Grading	12/25/2021	3/9/2022	5	53	
3	Building Construction	Building Construction	3/10/2022	3/20/2024	5	530	
4	Paving	Paving	3/21/2024	5/13/2024	5	38	
5	Architectural Coating	Architectural Coating	5/14/2024	7/4/2024	5	36	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 747,225; Residential Outdoor: 249,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 85,099 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	254.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1897	0.0000	0.1897	0.1043	0.0000	0.1043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0358	0.3676	0.3239	4.1000e-004		0.0179	0.0179		0.0164	0.0164	0.0000	36.0886	36.0886	0.0117	0.0000	36.3337
Total	0.0358	0.3676	0.3239	4.1000e-004	0.1897	0.0179	0.2076	0.1043	0.0164	0.1207	0.0000	36.0886	36.0886	0.0117	0.0000	36.3337

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	1.1500e-003	0.0104	3.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	1.9077	1.9077	1.1000e-004	0.0000	1.9100
Total	4.8000e-004	1.1500e-003	0.0104	3.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	1.9077	1.9077	1.1000e-004	0.0000	1.9100

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					0.1897	0.0000	0.1897	0.1043	0.0000	0.1043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0358	0.3676	0.3239	4.1000e-004		0.0179	0.0179		0.0164	0.0164	0.0000	36.0885	36.0885	0.0117	0.0000	36.3336
Total	0.0358	0.3676	0.3239	4.1000e-004	0.1897	0.0179	0.2076	0.1043	0.0164	0.1207	0.0000	36.0885	36.0885	0.0117	0.0000	36.3336

Mitigated Construction Off-Site

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

Worker	4.8000e-004	1.1500e-003	0.0104	3.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	1.9077	1.9077	1.1000e-004	0.0000	1.9100
Total	4.8000e-004	1.1500e-003	0.0104	3.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	1.9077	1.9077	1.1000e-004	0.0000	1.9100

3.3 Grading/Trenching - 2021
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2298	0.0000	0.2298	0.0953	0.0000	0.0953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0115	0.1203	0.0986	1.6000e-004		5.6900e-003	5.6900e-003		5.2400e-003	5.2400e-003	0.0000	14.3247	14.3247	4.6300e-003	0.0000	14.4220
Total	0.0115	0.1203	0.0986	1.6000e-004	0.2298	5.6900e-003	0.2355	0.0953	5.2400e-003	0.1006	0.0000	14.3247	14.3247	4.6300e-003	0.0000	14.4220

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	1.5000e-004	3.5000e-004	3.1700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5804	0.5804	3.0000e-005	0.0000	0.5811
Total	1.5000e-004	3.5000e-004	3.1700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5804	0.5804	3.0000e-005	0.0000	0.5811

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					0.2298	0.0000	0.2298	0.0953	0.0000	0.0953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0115	0.1203	0.0986	1.6000e-004		5.6900e-003	5.6900e-003		5.2400e-003	5.2400e-003	0.0000	14.3247	14.3247	4.6300e-003	0.0000	14.4219
Total	0.0115	0.1203	0.0986	1.6000e-004	0.2298	5.6900e-003	0.2355	0.0953	5.2400e-003	0.1006	0.0000	14.3247	14.3247	4.6300e-003	0.0000	14.4219

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	1.5000e-004	3.5000e-004	3.1700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5804	0.5804	3.0000e-005	0.0000	0.5811
Total	1.5000e-004	3.5000e-004	3.1700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5804	0.5804	3.0000e-005	0.0000	0.5811

3.3 Grading/Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2298	0.0000	0.2298	0.0953	0.0000	0.0953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0994	1.0059	0.9066	1.5700e-003		0.0474	0.0474		0.0436	0.0436	0.0000	137.6400	137.6400	0.0445	0.0000	138.5749
Total	0.0994	1.0059	0.9066	1.5700e-003	0.2298	0.0474	0.2772	0.0953	0.0436	0.1389	0.0000	137.6400	137.6400	0.0445	0.0000	138.5749

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	1.3200e-003	3.1900e-003	0.0288	9.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	5.0000e-005	1.8600e-003	0.0000	5.4820	5.4820	3.0000e-004	0.0000	5.4884
Total	1.3200e-003	3.1900e-003	0.0288	9.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	5.0000e-005	1.8600e-003	0.0000	5.4820	5.4820	3.0000e-004	0.0000	5.4884

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					0.2298	0.0000	0.2298	0.0953	0.0000	0.0953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0994	1.0059	0.9066	1.5700e-003		0.0474	0.0474		0.0436	0.0436	0.0000	137.6399	137.6399	0.0445	0.0000	138.5747
Total	0.0994	1.0059	0.9066	1.5700e-003	0.2298	0.0474	0.2772	0.0953	0.0436	0.1389	0.0000	137.6399	137.6399	0.0445	0.0000	138.5747

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	1.3200e-003	3.1900e-003	0.0288	9.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	5.0000e-005	1.8600e-003	0.0000	5.4820	5.4820	3.0000e-004	0.0000	5.4884
Total	1.3200e-003	3.1900e-003	0.0288	9.0000e-005	6.8200e-003	5.0000e-005	6.8700e-003	1.8100e-003	5.0000e-005	1.8600e-003	0.0000	5.4820	5.4820	3.0000e-004	0.0000	5.4884

3.4 Building Construction - 2022
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1801	1.6469	1.7307	2.8400e-003		0.0854	0.0854		0.0804	0.0804	0.0000	244.6110	244.6110	0.0585	0.0000	245.8398
Total	0.1801	1.6469	1.7307	2.8400e-003		0.0854	0.0854		0.0804	0.0804	0.0000	244.6110	244.6110	0.0585	0.0000	245.8398

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	0.2438	1.1668	3.6900	5.7900e-003	0.1572	0.0214	0.1786	0.0450	0.0197	0.0647	0.0000	489.5857	489.5857	3.6600e-003	0.0000	489.6626
Worker	0.1701	0.4094	3.6993	0.0113	0.8756	6.4400e-003	0.8820	0.2328	5.9700e-003	0.2388	0.0000	704.2540	704.2540	0.0392	0.0000	705.0767
Total	0.4139	1.5762	7.3893	0.0171	1.0328	0.0278	1.0606	0.2778	0.0257	0.3035	0.0000	1,193.8397	1,193.8397	0.0428	0.0000	1,194.7394

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	0.1801	1.6469	1.7307	2.8400e-003		0.0854	0.0854		0.0804	0.0804	0.0000	244.6107	244.6107	0.0585	0.0000	245.8396
Total	0.1801	1.6469	1.7307	2.8400e-003		0.0854	0.0854		0.0804	0.0804	0.0000	244.6107	244.6107	0.0585	0.0000	245.8396

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	0.2438	1.1668	3.6900	5.7900e-003	0.1572	0.0214	0.1786	0.0450	0.0197	0.0647	0.0000	489.5857	489.5857	3.6600e-003	0.0000	489.6626
Worker	0.1701	0.4094	3.6993	0.0113	0.8756	6.4400e-003	0.8820	0.2328	5.9700e-003	0.2388	0.0000	704.2540	704.2540	0.0392	0.0000	705.0767
Total	0.4139	1.5762	7.3893	0.0171	1.0328	0.0278	1.0606	0.2778	0.0257	0.3035	0.0000	1,193.8397	1,193.8397	0.0428	0.0000	1,194.7394

3.4 Building Construction - 2023

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	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0980	300.0980	0.0713	0.0000	301.5949
Total	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0980	300.0980	0.0713	0.0000	301.5949

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	0.2819	1.2940	4.3884	7.0900e-003	0.1929	0.0246	0.2175	0.0553	0.0227	0.0779	0.0000	599.9859	599.9859	4.2600e-003	0.0000	600.0754
Worker	0.1981	0.4764	4.3042	0.0138	1.0738	7.9400e-003	1.0818	0.2855	7.3600e-003	0.2929	0.0000	851.0021	851.0021	0.0466	0.0000	851.9800
Total	0.4800	1.7704	8.6925	0.0209	1.2667	0.0326	1.2992	0.3408	0.0300	0.3708	0.0000	1,450.9880	1,450.9880	0.0508	0.0000	1,452.0554

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	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0976	300.0976	0.0713	0.0000	301.5946

Total	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0976	300.0976	0.0713	0.0000	301.5946
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2819	1.2940	4.3884	7.0900e-003	0.1929	0.0246	0.2175	0.0553	0.0227	0.0779	0.0000	599.9859	599.9859	4.2600e-003	0.0000	600.0754
Worker	0.1981	0.4764	4.3042	0.0138	1.0738	7.9400e-003	1.0818	0.2855	7.3600e-003	0.2929	0.0000	851.0021	851.0021	0.0466	0.0000	851.9800
Total	0.4800	1.7704	8.6925	0.0209	1.2667	0.0326	1.2992	0.3408	0.0300	0.3708	0.0000	1,450.9880	1,450.9880	0.0508	0.0000	1,452.0554

3.4 Building Construction - 2024

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	0.0425	0.3879	0.4679	7.8000e-004		0.0177	0.0177		0.0167	0.0167	0.0000	66.9578	66.9578	0.0158	0.0000	67.2898
Total	0.0425	0.3879	0.4679	7.8000e-004		0.0177	0.0177		0.0167	0.0167	0.0000	66.9578	66.9578	0.0158	0.0000	67.2898

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	0.0607	0.2846	0.9539	1.5800e-003	0.0430	5.5100e-003	0.0486	0.0123	5.0700e-003	0.0174	0.0000	133.9049	133.9049	9.5000e-004	0.0000	133.9249
Worker	0.0422	0.1013	0.9177	3.0800e-003	0.2396	1.7800e-003	0.2413	0.0637	1.6500e-003	0.0653	0.0000	187.3042	187.3042	0.0101	0.0000	187.5163
Total	0.1029	0.3859	1.8715	4.6600e-003	0.2826	7.2900e-003	0.2899	0.0760	6.7200e-003	0.0827	0.0000	321.2091	321.2091	0.0111	0.0000	321.4412

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	0.0425	0.3879	0.4679	7.8000e-004		0.0177	0.0177		0.0167	0.0167	0.0000	66.9577	66.9577	0.0158	0.0000	67.2897
Total	0.0425	0.3879	0.4679	7.8000e-004		0.0177	0.0177		0.0167	0.0167	0.0000	66.9577	66.9577	0.0158	0.0000	67.2897

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	0.0607	0.2846	0.9539	1.5800e-003	0.0430	5.5100e-003	0.0486	0.0123	5.0700e-003	0.0174	0.0000	133.9049	133.9049	9.5000e-004	0.0000	133.9249
Worker	0.0422	0.1013	0.9177	3.0800e-003	0.2396	1.7800e-003	0.2413	0.0637	1.6500e-003	0.0653	0.0000	187.3042	187.3042	0.0101	0.0000	187.5163
Total	0.1029	0.3859	1.8715	4.6600e-003	0.2826	7.2900e-003	0.2899	0.0760	6.7200e-003	0.0827	0.0000	321.2091	321.2091	0.0111	0.0000	321.4412

3.5 Paving - 2024

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	0.0184	0.1776	0.2722	4.2000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	37.2409	37.2409	0.0120	0.0000	37.4938
Paving	6.6400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0251	0.1776	0.2722	4.2000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	37.2409	37.2409	0.0120	0.0000	37.4938

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	1.4900e-003	0.0135	5.0000e-005	3.5200e-003	3.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7515	2.7515	1.5000e-004	0.0000	2.7546
Total	6.2000e-004	1.4900e-003	0.0135	5.0000e-005	3.5200e-003	3.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7515	2.7515	1.5000e-004	0.0000	2.7546

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	0.0184	0.1776	0.2722	4.2000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	37.2408	37.2408	0.0120	0.0000	37.4938
Paving	6.6400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0251	0.1776	0.2722	4.2000e-004		8.7400e-003	8.7400e-003		8.0400e-003	8.0400e-003	0.0000	37.2408	37.2408	0.0120	0.0000	37.4938

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	1.4900e-003	0.0135	5.0000e-005	3.5200e-003	3.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7515	2.7515	1.5000e-004	0.0000	2.7546
Total	6.2000e-004	1.4900e-003	0.0135	5.0000e-005	3.5200e-003	3.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7515	2.7515	1.5000e-004	0.0000	2.7546

3.6 Architectural Coating - 2024

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	2.6048					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	3.4300e-003	0.0232	0.0344	6.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	4.8512	4.8512	2.7000e-004	0.0000	4.8569
Total	2.6082	0.0232	0.0344	6.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	4.8512	4.8512	2.7000e-004	0.0000	4.8569

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	5.5400e-003	0.0133	0.1204	4.0000e-004	0.0314	2.3000e-004	0.0317	8.3600e-003	2.2000e-004	8.5700e-003	0.0000	24.5800	24.5800	1.3300e-003	0.0000	24.6078
Total	5.5400e-003	0.0133	0.1204	4.0000e-004	0.0314	2.3000e-004	0.0317	8.3600e-003	2.2000e-004	8.5700e-003	0.0000	24.5800	24.5800	1.3300e-003	0.0000	24.6078

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	2.6048					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0232	0.0344	6.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	4.8512	4.8512	2.7000e-004	0.0000	4.8569
Total	2.6082	0.0232	0.0344	6.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	4.8512	4.8512	2.7000e-004	0.0000	4.8569

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	5.5400e-003	0.0133	0.1204	4.0000e-004	0.0314	2.3000e-004	0.0317	8.3600e-003	2.2000e-004	8.5700e-003	0.0000	24.5800	24.5800	1.3300e-003	0.0000	24.6078
Total	5.5400e-003	0.0133	0.1204	4.0000e-004	0.0314	2.3000e-004	0.0317	8.3600e-003	2.2000e-004	8.5700e-003	0.0000	24.5800	24.5800	1.3300e-003	0.0000	24.6078

CalEEMod Outputs

***Phase 3 Construction - Winter, Summer,
Annual***

Roberts Ranch - Phase 3 Construction
Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.55	Acre	7.55	328,878.00	0
City Park	3.52	Acre	3.52	153,331.20	0
Single Family Housing	305.00	Dwelling Unit	69.31	549,000.00	836

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	241,105.00	28,933.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	723,314.00	0.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,550.00	789.00

tblConstructionPhase	NumDays	155.00	79.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	60.00	31.00
tblLandUse	LotAcreage	99.03	69.31
tblLandUse	Population	872.00	836.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.7620	35.5849	51.4994	0.0994	18.2962	1.6508	19.5476	9.9917	1.5188	11.1430	0.0000	8,024.4184	8,024.4184	2.0576	0.0000	8,067.6284
2025	3.0881	18.5372	50.3986	0.0994	4.6586	0.6384	5.2969	1.2490	0.5984	1.8475	0.0000	7,987.9195	7,987.9195	0.7887	0.0000	8,004.4812
2026	3.0201	18.4117	49.5007	0.0997	4.6587	0.6388	5.2975	1.2491	0.5988	1.8479	0.0000	7,975.9484	7,975.9484	0.7864	0.0000	7,992.4634
2027	2.9802	18.3047	48.6490	0.0997	4.6588	0.6391	5.2980	1.2492	0.5991	1.8483	0.0000	7,947.8905	7,947.8905	0.7833	0.0000	7,964.3391
2028	126.5717	8.4983	14.9097	0.0247	0.7919	0.4124	0.8494	0.2100	0.3794	0.4302	0.0000	2,310.8707	2,310.8707	0.7065	0.0000	2,325.7078
Total	139.4220	99.3367	214.9575	0.4228	33.0642	3.9795	36.2894	13.9489	3.6946	17.1169	0.0000	34,247.0475	34,247.0475	5.1225	0.0000	34,354.6198

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.7620	35.5849	51.4994	0.0994	18.2962	1.6508	19.5476	9.9917	1.5188	11.1430	0.0000	8,024.4184	8,024.4184	2.0576	0.0000	8,067.6284
2025	3.0881	18.5372	50.3986	0.0994	4.6586	0.6384	5.2969	1.2490	0.5984	1.8475	0.0000	7,987.9195	7,987.9195	0.7887	0.0000	8,004.4812
2026	3.0201	18.4117	49.5007	0.0997	4.6587	0.6388	5.2975	1.2491	0.5988	1.8479	0.0000	7,975.9484	7,975.9484	0.7864	0.0000	7,992.4634
2027	2.9802	18.3047	48.6490	0.0997	4.6588	0.6391	5.2980	1.2492	0.5991	1.8483	0.0000	7,947.8905	7,947.8905	0.7833	0.0000	7,964.3391
2028	126.5717	8.4983	14.9097	0.0247	0.7919	0.4124	0.8494	0.2100	0.3794	0.4302	0.0000	2,310.8707	2,310.8707	0.7065	0.0000	2,325.7078
Total	139.4220	99.3367	214.9575	0.4228	33.0642	3.9795	36.2894	13.9489	3.6946	17.1169	0.0000	34,247.0475	34,247.0475	5.1225	0.0000	34,354.6198

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2024	8/16/2024	5	31	
2	Grading/Trenching	Grading	8/17/2024	12/5/2024	5	79	
3	Building Construction	Building Construction	12/6/2024	12/15/2027	5	789	
4	Paving	Paving	12/16/2027	3/2/2028	5	56	
5	Architectural Coating	Architectural Coating	3/3/2028	5/19/2028	5	56	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,111,725; Residential Outdoor: 370,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 28,933 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42

Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	312.00	112.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	62.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.8238	27.5450	27.6020	0.0392		1.2498	1.2498		1.1498	1.1498		3,794.3149	3,794.3149	1.2272		3,820.0852
Total	2.8238	27.5450	27.6020	0.0392	18.0663	1.2498	19.3161	9.9307	1.1498	11.0805		3,794.3149	3,794.3149	1.2272		3,820.0852

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.1061	0.8638	2.8000e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		187.2753	187.2753	0.0103		187.4922
Total	0.0404	0.1061	0.8638	2.8000e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		187.2753	187.2753	0.0103		187.4922

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.8238	27.5450	27.6020	0.0392		1.2498	1.2498		1.1498	1.1498	0.0000	3,794.3149	3,794.3149	1.2272		3,820.0852
Total	2.8238	27.5450	27.6020	0.0392	18.0663	1.2498	19.3161	9.9307	1.1498	11.0805	0.0000	3,794.3149	3,794.3149	1.2272		3,820.0852

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0404	0.1061	0.8638	2.8000e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		187.2753	187.2753	0.0103		187.4922
Total	0.0404	0.1061	0.8638	2.8000e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		187.2753	187.2753	0.0103		187.4922

3.3 Grading/Trenching - 2024
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.7104	35.4493	36.1160	0.0653		1.6487	1.6487		1.5168	1.5168		6,321.2517	6,321.2517	2.0444		6,364.1846
Total	3.7104	35.4493	36.1160	0.0653	8.6733	1.6487	10.3221	3.5965	1.5168	5.1133		6,321.2517	6,321.2517	2.0444		6,364.1846

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0516	0.1356	1.1038	3.5800e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		239.2962	239.2962	0.0132		239.5734
Total	0.0516	0.1356	1.1038	3.5800e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		239.2962	239.2962	0.0132		239.5734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.7104	35.4493	36.1160	0.0653		1.6487	1.6487		1.5168	1.5168	0.0000	6,321.2517	6,321.2517	2.0444		6,364.1846
Total	3.7104	35.4493	36.1160	0.0653	8.6733	1.6487	10.3221	3.5965	1.5168	5.1133	0.0000	6,321.2517	6,321.2517	2.0444		6,364.1846

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0516	0.1356	1.1038	3.5800e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		239.2962	239.2962	0.0132		239.5734
Total	0.0516	0.1356	1.1038	3.5800e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		239.2962	239.2962	0.0132		239.5734

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349

Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0678	4.4189	20.3931	0.0240	0.6731	0.0843	0.7574	0.1921	0.0775	0.2696		2,233.1978	2,233.1978	0.0163		2,233.5411
Worker	0.7000	1.8389	14.9731	0.0485	3.9852	0.0287	4.0139	1.0568	0.0266	1.0834		3,246.1052	3,246.1052	0.1790		3,249.8648
Total	1.7678	6.2578	35.3662	0.0725	4.6583	0.1129	4.7712	1.2489	0.1041	1.3531		5,479.3030	5,479.3030	0.1954		5,483.4058

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0678	4.4189	20.3931	0.0240	0.6731	0.0843	0.7574	0.1921	0.0775	0.2696		2,233.1978	2,233.1978	0.0163		2,233.5411
Worker	0.7000	1.8389	14.9731	0.0485	3.9852	0.0287	4.0139	1.0568	0.0266	1.0834		3,246.1052	3,246.1052	0.1790		3,249.8648
Total	1.7678	6.2578	35.3662	0.0725	4.6583	0.1129	4.7712	1.2489	0.1041	1.3531		5,479.3030	5,479.3030	0.1954		5,483.4058

3.4 Building Construction - 2025
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	1.0532	4.3647	19.9553	0.0240	0.6734	0.0845	0.7578	0.1922	0.0777	0.2699		2,234.2627	2,234.2627	0.0164		2,234.6070
Worker	0.6734	1.7628	14.3916	0.0485	3.9852	0.0289	4.0141	1.0568	0.0268	1.0836		3,207.7662	3,207.7662	0.1747		3,211.4356
Total	1.7266	6.1275	34.3468	0.0725	4.6586	0.1134	4.7719	1.2490	0.1045	1.3536		5,442.0290	5,442.0290	0.1911		5,446.0426

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0532	4.3647	19.9553	0.0240	0.6734	0.0845	0.7578	0.1922	0.0777	0.2699		2,234.2627	2,234.2627	0.0164		2,234.6070
Worker	0.6734	1.7628	14.3916	0.0485	3.9852	0.0289	4.0141	1.0568	0.0268	1.0836		3,207.7662	3,207.7662	0.1747		3,211.4356
Total	1.7266	6.1275	34.3468	0.0725	4.6586	0.1134	4.7719	1.2490	0.1045	1.3536		5,442.0290	5,442.0290	0.1911		5,446.0426

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0064	4.2987	19.5046	0.0240	0.6735	0.0844	0.7579	0.1923	0.0776	0.2699		2,234.5946	2,234.5946	0.0164		2,234.9390
Worker	0.6522	1.7034	13.9443	0.0488	3.9852	0.0294	4.0146	1.0568	0.0273	1.0841		3,195.4633	3,195.4633	0.1725		3,199.0858
Total	1.6586	6.0020	33.4490	0.0728	4.6587	0.1138	4.7725	1.2491	0.1049	1.3540		5,430.0579	5,430.0579	0.1889		5,434.0248

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0064	4.2987	19.5046	0.0240	0.6735	0.0844	0.7579	0.1923	0.0776	0.2699		2,234.5946	2,234.5946	0.0164		2,234.9390
Worker	0.6522	1.7034	13.9443	0.0488	3.9852	0.0294	4.0146	1.0568	0.0273	1.0841		3,195.4633	3,195.4633	0.1725		3,199.0858
Total	1.6586	6.0020	33.4490	0.0728	4.6587	0.1138	4.7725	1.2491	0.1049	1.3540		5,430.0579	5,430.0579	0.1889		5,434.0248

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9870	4.2484	19.0876	0.0240	0.6736	0.0845	0.7581	0.1923	0.0777	0.2700		2,235.1800	2,235.1800	0.0164		2,235.5251
Worker	0.6318	1.6466	13.5097	0.0488	3.9852	0.0297	4.0149	1.0568	0.0275	1.0844		3,166.8200	3,166.8200	0.1693		3,170.3754
Total	1.6187	5.8950	32.5972	0.0728	4.6588	0.1141	4.7730	1.2492	0.1052	1.3544		5,402.0000	5,402.0000	0.1857		5,405.9005

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.9870	4.2484	19.0876	0.0240	0.6736	0.0845	0.7581	0.1923	0.0777	0.2700		2,235.1800	2,235.1800	0.0164		2,235.5251
Worker	0.6318	1.6466	13.5097	0.0488	3.9852	0.0297	4.0149	1.0568	0.0275	1.0844		3,166.8200	3,166.8200	0.1693		3,170.3754
Total	1.6187	5.8950	32.5972	0.0728	4.6588	0.1141	4.7730	1.2492	0.1052	1.3544		5,402.0000	5,402.0000	0.1857		5,405.9005

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0304	0.0792	0.6495	2.3500e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		152.2510	152.2510	8.1400e-003		152.4219
Total	0.0304	0.0792	0.6495	2.3500e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		152.2510	152.2510	8.1400e-003		152.4219

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0304	0.0792	0.6495	2.3500e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		152.2510	152.2510	8.1400e-003		152.4219
Total	0.0304	0.0792	0.6495	2.3500e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		152.2510	152.2510	8.1400e-003		152.4219

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0295	0.0767	0.6317	2.3500e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		151.0740	151.0740	8.0100e-003		151.2422
Total	0.0295	0.0767	0.6317	2.3500e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		151.0740	151.0740	8.0100e-003		151.2422

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0295	0.0767	0.6317	2.3500e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		151.0740	151.0740	8.0100e-003		151.2422
Total	0.0295	0.0767	0.6317	2.3500e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		151.0740	151.0740	8.0100e-003		151.2422

3.6 Architectural Coating - 2028
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	126.2789					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	126.4497	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1220	0.3172	2.6108	9.7000e-003	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155		624.4393	624.4393	0.0331		625.1342
Total	0.1220	0.3172	2.6108	9.7000e-003	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155		624.4393	624.4393	0.0331		625.1342

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	126.2789					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	126.4497	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1220	0.3172	2.6108	9.7000e-003	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155		624.4393	624.4393	0.0331		625.1342
Total	0.1220	0.3172	2.6108	9.7000e-003	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155		624.4393	624.4393	0.0331		625.1342

Roberts Ranch - Phase 3 Construction Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.55	Acre	7.55	328,878.00	0
City Park	3.52	Acre	3.52	153,331.20	0
Single Family Housing	305.00	Dwelling Unit	69.31	549,000.00	836

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	241,105.00	28,933.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	723,314.00	0.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,550.00	789.00

tblConstructionPhase	NumDays	155.00	79.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	60.00	31.00
tblLandUse	LotAcreage	99.03	69.31
tblLandUse	Population	872.00	836.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.7669	35.5559	43.6758	0.1052	18.2962	1.6508	19.5476	9.9917	1.5188	11.1430	0.0000	8,430.9345	8,430.9345	2.0576	0.0000	8,474.1445
2025	2.9251	17.8889	42.7881	0.1053	4.6586	0.6376	5.2961	1.2490	0.5977	1.8467	0.0000	8,390.2162	8,390.2162	0.7880	0.0000	8,406.7650
2026	2.8683	17.7835	42.1246	0.1056	4.6587	0.6380	5.2967	1.2491	0.5981	1.8472	0.0000	8,377.0141	8,377.0141	0.7858	0.0000	8,393.5162
2027	2.8358	17.6941	41.4935	0.1056	4.6588	0.6384	5.2972	1.2492	0.5984	1.8476	0.0000	8,345.8530	8,345.8530	0.7827	0.0000	8,362.2885
2028	126.5830	8.4820	15.0063	0.0249	0.7919	0.4124	0.8494	0.2100	0.3794	0.4302	0.0000	2,328.9544	2,328.9544	0.7065	0.0000	2,343.7915
Total	138.9792	97.4043	185.0884	0.4467	33.0642	3.9772	36.2870	13.9489	3.6924	17.1147	0.0000	35,872.9722	35,872.9722	5.1207	0.0000	35,980.5057

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.7669	35.5559	43.6758	0.1052	18.2962	1.6508	19.5476	9.9917	1.5188	11.1430	0.0000	8,430.9345	8,430.9345	2.0576	0.0000	8,474.1445
2025	2.9251	17.8889	42.7881	0.1053	4.6586	0.6376	5.2961	1.2490	0.5977	1.8467	0.0000	8,390.2162	8,390.2162	0.7880	0.0000	8,406.7650
2026	2.8683	17.7835	42.1246	0.1056	4.6587	0.6380	5.2967	1.2491	0.5981	1.8472	0.0000	8,377.0141	8,377.0141	0.7858	0.0000	8,393.5162
2027	2.8358	17.6941	41.4935	0.1056	4.6588	0.6384	5.2972	1.2492	0.5984	1.8476	0.0000	8,345.8530	8,345.8530	0.7827	0.0000	8,362.2885
2028	126.5830	8.4820	15.0063	0.0249	0.7919	0.4124	0.8494	0.2100	0.3794	0.4302	0.0000	2,328.9544	2,328.9544	0.7065	0.0000	2,343.7915
Total	138.9792	97.4043	185.0884	0.4467	33.0642	3.9772	36.2870	13.9489	3.6924	17.1147	0.0000	35,872.9722	35,872.9722	5.1207	0.0000	35,980.5057

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2024	8/16/2024	5	31	
2	Grading/Trenching	Grading	8/17/2024	12/5/2024	5	79	
3	Building Construction	Building Construction	12/6/2024	12/15/2027	5	789	
4	Paving	Paving	12/16/2027	3/2/2028	5	56	
5	Architectural Coating	Architectural Coating	3/3/2028	5/19/2028	5	56	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,111,725; Residential Outdoor: 370,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 28,933 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42

Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	312.00	112.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	62.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.8238	27.5450	27.6020	0.0392		1.2498	1.2498		1.1498	1.1498		3,794.3149	3,794.3149	1.2272		3,820.0852
Total	2.8238	27.5450	27.6020	0.0392	18.0663	1.2498	19.3161	9.9307	1.1498	11.0805		3,794.3149	3,794.3149	1.2272		3,820.0852

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0442	0.0834	0.9863	3.1300e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		209.6207	209.6207	0.0103		209.8376
Total	0.0442	0.0834	0.9863	3.1300e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		209.6207	209.6207	0.0103		209.8376

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.8238	27.5450	27.6020	0.0392		1.2498	1.2498		1.1498	1.1498	0.0000	3,794.3149	3,794.3149	1.2272		3,820.0852
Total	2.8238	27.5450	27.6020	0.0392	18.0663	1.2498	19.3161	9.9307	1.1498	11.0805	0.0000	3,794.3149	3,794.3149	1.2272		3,820.0852

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0442	0.0834	0.9863	3.1300e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		209.6207	209.6207	0.0103		209.8376
Total	0.0442	0.0834	0.9863	3.1300e-003	0.2299	1.6500e-003	0.2316	0.0610	1.5300e-003	0.0625		209.6207	209.6207	0.0103		209.8376

3.3 Grading/Trenching - 2024
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000				0.0000
Off-Road	3.7104	35.4493	36.1160	0.0653		1.6487	1.6487		1.5168	1.5168		6,321.2517	6,321.2517	2.0444			6,364.1846
Total	3.7104	35.4493	36.1160	0.0653	8.6733	1.6487	10.3221	3.5965	1.5168	5.1133		6,321.2517	6,321.2517	2.0444			6,364.1846

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0565	0.1065	1.2603	4.0000e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		267.8487	267.8487	0.0132			268.1258
Total	0.0565	0.1065	1.2603	4.0000e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		267.8487	267.8487	0.0132			268.1258

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.7104	35.4493	36.1160	0.0653		1.6487	1.6487		1.5168	1.5168	0.0000	6,321.2517	6,321.2517	2.0444		6,364.1846
Total	3.7104	35.4493	36.1160	0.0653	8.6733	1.6487	10.3221	3.5965	1.5168	5.1133	0.0000	6,321.2517	6,321.2517	2.0444		6,364.1846

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0565	0.1065	1.2603	4.0000e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		267.8487	267.8487	0.0132		268.1258
Total	0.0565	0.1065	1.2603	4.0000e-003	0.2938	2.1100e-003	0.2959	0.0779	1.9600e-003	0.0799		267.8487	267.8487	0.0132		268.1258

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349

Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8314	4.1413	10.4460	0.0241	0.6731	0.0835	0.7566	0.1921	0.0768	0.2689		2,252.3934	2,252.3934	0.0157		2,252.7238
Worker	0.7662	1.4449	17.0966	0.0543	3.9852	0.0287	4.0139	1.0568	0.0266	1.0834		3,633.4257	3,633.4257	0.1790		3,637.1853
Total	1.5976	5.5863	27.5426	0.0784	4.6583	0.1121	4.7704	1.2489	0.1034	1.3523		5,885.8191	5,885.8191	0.1948		5,889.9090

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8314	4.1413	10.4460	0.0241	0.6731	0.0835	0.7566	0.1921	0.0768	0.2689		2,252.3934	2,252.3934	0.0157		2,252.7238
Worker	0.7662	1.4449	17.0966	0.0543	3.9852	0.0287	4.0139	1.0568	0.0266	1.0834		3,633.4257	3,633.4257	0.1790		3,637.1853
Total	1.5976	5.5863	27.5426	0.0784	4.6583	0.1121	4.7704	1.2489	0.1034	1.3523		5,885.8191	5,885.8191	0.1948		5,889.9090

3.4 Building Construction - 2025
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.8267	4.0932	10.2588	0.0241	0.6734	0.0837	0.7571	0.1922	0.0770	0.2692		2,253.4626	2,253.4626	0.0158		2,253.7939
Worker	0.7369	1.3860	16.4775	0.0543	3.9852	0.0289	4.0141	1.0568	0.0268	1.0836		3,590.8631	3,590.8631	0.1747		3,594.5325
Total	1.5636	5.4792	26.7363	0.0784	4.6586	0.1126	4.7711	1.2490	0.1038	1.3528		5,844.3257	5,844.3257	0.1905		5,848.3264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8267	4.0932	10.2588	0.0241	0.6734	0.0837	0.7571	0.1922	0.0770	0.2692		2,253.4626	2,253.4626	0.0158		2,253.7939
Worker	0.7369	1.3860	16.4775	0.0543	3.9852	0.0289	4.0141	1.0568	0.0268	1.0836		3,590.8631	3,590.8631	0.1747		3,594.5325
Total	1.5636	5.4792	26.7363	0.0784	4.6586	0.1126	4.7711	1.2490	0.1038	1.3528		5,844.3257	5,844.3257	0.1905		5,848.3264

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7933	4.0340	10.0626	0.0241	0.6735	0.0836	0.7571	0.1923	0.0769	0.2692		2,253.7976	2,253.7976	0.0158		2,254.1291
Worker	0.7136	1.3398	16.0102	0.0547	3.9852	0.0294	4.0146	1.0568	0.0273	1.0841		3,577.3260	3,577.3260	0.1725		3,580.9486
Total	1.5069	5.3738	26.0728	0.0788	4.6587	0.1130	4.7717	1.2491	0.1042	1.3533		5,831.1236	5,831.1236	0.1883		5,835.0777

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7933	4.0340	10.0626	0.0241	0.6735	0.0836	0.7571	0.1923	0.0769	0.2692		2,253.7976	2,253.7976	0.0158		2,254.1291
Worker	0.7136	1.3398	16.0102	0.0547	3.9852	0.0294	4.0146	1.0568	0.0273	1.0841		3,577.3260	3,577.3260	0.1725		3,580.9486
Total	1.5069	5.3738	26.0728	0.0788	4.6587	0.1130	4.7717	1.2491	0.1042	1.3533		5,831.1236	5,831.1236	0.1883		5,835.0777

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7835	3.9886	9.8958	0.0241	0.6736	0.0837	0.7573	0.1923	0.0770	0.2693		2,254.3856	2,254.3856	0.0158		2,254.7177
Worker	0.6909	1.2958	15.5460	0.0547	3.9852	0.0297	4.0149	1.0568	0.0275	1.0844		3,545.5768	3,545.5768	0.1693		3,549.1322
Total	1.4744	5.2844	25.4418	0.0788	4.6588	0.1133	4.7722	1.2492	0.1045	1.3537		5,799.9624	5,799.9624	0.1851		5,803.8500

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.7835	3.9886	9.8958	0.0241	0.6736	0.0837	0.7573	0.1923	0.0770	0.2693		2,254.3856	2,254.3856	0.0158		2,254.7177
Worker	0.6909	1.2958	15.5460	0.0547	3.9852	0.0297	4.0149	1.0568	0.0275	1.0844		3,545.5768	3,545.5768	0.1693		3,549.1322
Total	1.4744	5.2844	25.4418	0.0788	4.6588	0.1133	4.7722	1.2492	0.1045	1.3537		5,799.9624	5,799.9624	0.1851		5,803.8500

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0623	0.7474	2.6300e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		170.4604	170.4604	8.1400e-003		170.6314
Total	0.0332	0.0623	0.7474	2.6300e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		170.4604	170.4604	8.1400e-003		170.6314

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0332	0.0623	0.7474	2.6300e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		170.4604	170.4604	8.1400e-003		170.6314
Total	0.0332	0.0623	0.7474	2.6300e-003	0.1916	1.4300e-003	0.1930	0.0508	1.3200e-003	0.0521		170.4604	170.4604	8.1400e-003		170.6314

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0604	0.7283	2.6300e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		169.1578	169.1578	8.0100e-003		169.3259
Total	0.0323	0.0604	0.7283	2.6300e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		169.1578	169.1578	8.0100e-003		169.3259

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.3532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2506	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0604	0.7283	2.6300e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		169.1578	169.1578	8.0100e-003		169.3259
Total	0.0323	0.0604	0.7283	2.6300e-003	0.1916	1.4400e-003	0.1930	0.0508	1.3300e-003	0.0521		169.1578	169.1578	8.0100e-003		169.3259

3.6 Architectural Coating - 2028
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	126.2789					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	126.4497	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1333	0.2497	3.0103	0.0109	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155	699.1854	699.1854	0.0331	699.8803		
Total	0.1333	0.2497	3.0103	0.0109	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155	699.1854	699.1854	0.0331	699.8803		

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	126.2789					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705
Total	126.4497	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.7705

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1333	0.2497	3.0103	0.0109	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155	699.1854	699.1854	0.0331	699.8803		
Total	0.1333	0.2497	3.0103	0.0109	0.7919	5.9400e-003	0.7979	0.2100	5.5100e-003	0.2155	699.1854	699.1854	0.0331	699.8803		

**Roberts Ranch - Phase 3 Construction
Solano-Sacramento County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.55	Acre	7.55	328,878.00	0
City Park	3.52	Acre	3.52	153,331.20	0
Single Family Housing	305.00	Dwelling Unit	69.31	549,000.00	836

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Roads and park acreage of ROW proportionalized based on # dwelling units. Population assumes 2.74 people per household
 Construction Phase - Adjusted schedule based on proportion of residential dwelling units to be constructed in this phase
 Architectural Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses
 Off-road Equipment - Added a trencher to account for infrastructure construction

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	241,105.00	28,933.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	723,314.00	0.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,550.00	789.00

tblConstructionPhase	NumDays	155.00	79.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	60.00	31.00
tblLandUse	LotAcreage	99.03	69.31
tblLandUse	Population	872.00	836.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2205	2.0074	2.3191	4.2800e-003	0.6779	0.0911	0.7690	0.3108	0.0839	0.3947	0.0000	357.5459	357.5459	0.0976	0.0000	359.5962
2025	0.3822	2.3813	5.8034	0.0131	0.5882	0.0833	0.6714	0.1581	0.0780	0.2362	0.0000	955.6814	955.6814	0.0933	0.0000	957.6412
2026	0.3745	2.3662	5.7092	0.0132	0.5882	0.0833	0.6715	0.1582	0.0781	0.2362	0.0000	954.2403	954.2403	0.0931	0.0000	956.1945
2027	0.3608	2.2961	5.4513	0.0127	0.5623	0.0820	0.6442	0.1512	0.0768	0.2280	0.0000	919.7348	919.7348	0.0923	0.0000	921.6725
2028	3.5721	0.2267	0.4509	9.0000e-004	0.0255	0.0107	0.0362	6.7800e-003	9.9400e-003	0.0167	0.0000	69.5644	69.5644	0.0153	0.0000	69.8863
Total	4.9100	9.2778	19.7339	0.0442	2.4419	0.3503	2.7923	0.7850	0.3268	1.1119	0.0000	3,256.7667	3,256.7667	0.3916	0.0000	3,264.9907

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					
2024	0.2205	2.0074	2.3191	4.2800e-003	0.6779	0.0911	0.7690	0.3108	0.0839	0.3947	0.0000	357.5455	357.5455	0.0976	0.0000	359.5958
2025	0.3822	2.3813	5.8034	0.0131	0.5882	0.0833	0.6714	0.1581	0.0780	0.2362	0.0000	955.6810	955.6810	0.0933	0.0000	957.6409
2026	0.3745	2.3662	5.7092	0.0132	0.5882	0.0833	0.6715	0.1582	0.0781	0.2362	0.0000	954.2399	954.2399	0.0931	0.0000	956.1942
2027	0.3608	2.2961	5.4513	0.0127	0.5623	0.0820	0.6442	0.1512	0.0768	0.2280	0.0000	919.7344	919.7344	0.0923	0.0000	921.6721
2028	3.5721	0.2267	0.4509	9.0000e-004	0.0255	0.0107	0.0362	6.7800e-003	9.9400e-003	0.0167	0.0000	69.5643	69.5643	0.0153	0.0000	69.8863
Total	4.9100	9.2778	19.7339	0.0442	2.4419	0.3503	2.7923	0.7850	0.3268	1.1119	0.0000	3,256.7652	3,256.7652	0.3916	0.0000	3,264.9892

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2024	8/16/2024	5	31	
2	Grading/Trenching	Grading	8/17/2024	12/5/2024	5	79	
3	Building Construction	Building Construction	12/6/2024	12/15/2027	5	789	
4	Paving	Paving	12/16/2027	3/2/2028	5	56	
5	Architectural Coating	Architectural Coating	3/3/2028	5/19/2028	5	56	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,111,725; Residential Outdoor: 370,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 28,933 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading/Trenching	Excavators	2	8.00	162	0.38
Grading/Trenching	Graders	1	8.00	174	0.41
Grading/Trenching	Rubber Tired Dozers	1	8.00	255	0.40
Grading/Trenching	Scrapers	2	8.00	361	0.48
Grading/Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	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	125	0.42

Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading/Trenching	Trenchers	1	8.00	80	0.50

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading/Trenching	9	23.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	312.00	112.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	62.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2024

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					0.2800	0.0000	0.2800	0.1539	0.0000	0.1539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0438	0.4270	0.4278	6.1000e-004		0.0194	0.0194		0.0178	0.0178	0.0000	53.3532	53.3532	0.0173	0.0000	53.7156
Total	0.0438	0.4270	0.4278	6.1000e-004	0.2800	0.0194	0.2994	0.1539	0.0178	0.1718	0.0000	53.3532	53.3532	0.0173	0.0000	53.7156

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	1.4600e-003	0.0132	4.0000e-005	3.4400e-003	3.0000e-005	3.4700e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6936	2.6936	1.5000e-004	0.0000	2.6966
Total	6.1000e-004	1.4600e-003	0.0132	4.0000e-005	3.4400e-003	3.0000e-005	3.4700e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6936	2.6936	1.5000e-004	0.0000	2.6966

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					0.2800	0.0000	0.2800	0.1539	0.0000	0.1539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0438	0.4270	0.4278	6.1000e-004		0.0194	0.0194		0.0178	0.0178	0.0000	53.3532	53.3532	0.0173	0.0000	53.7155
Total	0.0438	0.4270	0.4278	6.1000e-004	0.2800	0.0194	0.2994	0.1539	0.0178	0.1718	0.0000	53.3532	53.3532	0.0173	0.0000	53.7155

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	1.4600e-003	0.0132	4.0000e-005	3.4400e-003	3.0000e-005	3.4700e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6936	2.6936	1.5000e-004	0.0000	2.6966
Total	6.1000e-004	1.4600e-003	0.0132	4.0000e-005	3.4400e-003	3.0000e-005	3.4700e-003	9.2000e-004	2.0000e-005	9.4000e-004	0.0000	2.6936	2.6936	1.5000e-004	0.0000	2.6966

3.3 Grading/Trenching - 2024
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					0.3426	0.0000	0.3426	0.1421	0.0000	0.1421	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1466	1.4003	1.4266	2.5800e-003		0.0651	0.0651		0.0599	0.0599	0.0000	226.5145	226.5145	0.0733	0.0000	228.0529
Total	0.1466	1.4003	1.4266	2.5800e-003	0.3426	0.0651	0.4077	0.1421	0.0599	0.2020	0.0000	226.5145	226.5145	0.0733	0.0000	228.0529

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	1.9800e-003	4.7500e-003	0.0430	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9800e-003	8.0000e-005	3.0600e-003	0.0000	8.7710	8.7710	4.7000e-004	0.0000	8.7809
Total	1.9800e-003	4.7500e-003	0.0430	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9800e-003	8.0000e-005	3.0600e-003	0.0000	8.7710	8.7710	4.7000e-004	0.0000	8.7809

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					0.3426	0.0000	0.3426	0.1421	0.0000	0.1421	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1466	1.4003	1.4266	2.5800e-003		0.0651	0.0651		0.0599	0.0599	0.0000	226.5142	226.5142	0.0733	0.0000	228.0526
Total	0.1466	1.4003	1.4266	2.5800e-003	0.3426	0.0651	0.4077	0.1421	0.0599	0.2020	0.0000	226.5142	226.5142	0.0733	0.0000	228.0526

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	1.9800e-003	4.7500e-003	0.0430	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9800e-003	8.0000e-005	3.0600e-003	0.0000	8.7710	8.7710	4.7000e-004	0.0000	8.7809
Total	1.9800e-003	4.7500e-003	0.0430	1.4000e-004	0.0112	8.0000e-005	0.0113	2.9800e-003	8.0000e-005	3.0600e-003	0.0000	8.7710	8.7710	4.7000e-004	0.0000	8.7809

3.4 Building Construction - 2024

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	0.0132	0.1204	0.1452	2.4000e-004		5.4900e-003	5.4900e-003		5.1700e-003	5.1700e-003	0.0000	20.7800	20.7800	4.9100e-003	0.0000	20.8830

Total	0.0132	0.1204	0.1452	2.4000e-004		5.4900e-003	5.4900e-003		5.1700e-003	5.1700e-003	0.0000	20.7800	20.7800	4.9100e-003	0.0000	20.8830
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3100e-003	0.0390	0.1305	2.2000e-004	5.8900e-003	7.5000e-004	6.6400e-003	1.6900e-003	6.9000e-004	2.3800e-003	0.0000	18.3242	18.3242	1.3000e-004	0.0000	18.3270
Worker	6.1100e-003	0.0147	0.1328	4.5000e-004	0.0347	2.6000e-004	0.0349	9.2200e-003	2.4000e-004	9.4600e-003	0.0000	27.1094	27.1094	1.4600e-003	0.0000	27.1401
Total	0.0144	0.0536	0.2634	6.7000e-004	0.0406	1.0100e-003	0.0416	0.0109	9.3000e-004	0.0118	0.0000	45.4337	45.4337	1.5900e-003	0.0000	45.4671

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	0.0132	0.1204	0.1452	2.4000e-004		5.4900e-003	5.4900e-003		5.1700e-003	5.1700e-003	0.0000	20.7800	20.7800	4.9100e-003	0.0000	20.8830
Total	0.0132	0.1204	0.1452	2.4000e-004		5.4900e-003	5.4900e-003		5.1700e-003	5.1700e-003	0.0000	20.7800	20.7800	4.9100e-003	0.0000	20.8830

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.3100e-003	0.0390	0.1305	2.2000e-004	5.8900e-003	7.5000e-004	6.6400e-003	1.6900e-003	6.9000e-004	2.3800e-003	0.0000	18.3242	18.3242	1.3000e-004	0.0000	18.3270
Worker	6.1100e-003	0.0147	0.1328	4.5000e-004	0.0347	2.6000e-004	0.0349	9.2200e-003	2.4000e-004	9.4600e-003	0.0000	27.1094	27.1094	1.4600e-003	0.0000	27.1401
Total	0.0144	0.0536	0.2634	6.7000e-004	0.0406	1.0100e-003	0.0416	0.0109	9.3000e-004	0.0118	0.0000	45.4337	45.4337	1.5900e-003	0.0000	45.4671

3.4 Building Construction - 2025
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	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874

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	0.1193	0.5580	1.8554	3.1400e-003	0.0854	0.0110	0.0964	0.0245	0.0101	0.0346	0.0000	265.8274	265.8274	1.9000e-003	0.0000	265.8672
Worker	0.0852	0.2039	1.8532	6.4700e-003	0.5027	3.7700e-003	0.5065	0.1337	3.5000e-003	0.1372	0.0000	388.4521	388.4521	0.0207	0.0000	388.8865
Total	0.2045	0.7619	3.7087	9.6100e-003	0.5882	0.0147	0.6029	0.1581	0.0136	0.1717	0.0000	654.2795	654.2795	0.0226	0.0000	654.7538

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	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871

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	0.1193	0.5580	1.8554	3.1400e-003	0.0854	0.0110	0.0964	0.0245	0.0101	0.0346	0.0000	265.8274	265.8274	1.9000e-003	0.0000	265.8672
Worker	0.0852	0.2039	1.8532	6.4700e-003	0.5027	3.7700e-003	0.5065	0.1337	3.5000e-003	0.1372	0.0000	388.4521	388.4521	0.0207	0.0000	388.8865
Total	0.2045	0.7619	3.7087	9.6100e-003	0.5882	0.0147	0.6029	0.1581	0.0136	0.1717	0.0000	654.2795	654.2795	0.0226	0.0000	654.7538

3.4 Building Construction - 2026

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	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874

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	0.1143	0.5497	1.8167	3.1400e-003	0.0854	0.0110	0.0964	0.0245	0.0101	0.0346	0.0000	265.8669	265.8669	1.9000e-003	0.0000	265.9068
Worker	0.0826	0.1970	1.7977	6.5100e-003	0.5027	3.8400e-003	0.5066	0.1337	3.5600e-003	0.1372	0.0000	386.9715	386.9715	0.0204	0.0000	387.4003
Total	0.1968	0.7468	3.6145	9.6500e-003	0.5882	0.0148	0.6030	0.1582	0.0136	0.1718	0.0000	652.8384	652.8384	0.0223	0.0000	653.3071

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	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871

Total	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1143	0.5497	1.8167	3.1400e-003	0.0854	0.0110	0.0964	0.0245	0.0101	0.0346	0.0000	265.8669	265.8669	1.9000e-003	0.0000	265.9068
Worker	0.0826	0.1970	1.7977	6.5100e-003	0.5027	3.8400e-003	0.5066	0.1337	3.5600e-003	0.1372	0.0000	386.9715	386.9715	0.0204	0.0000	387.4003
Total	0.1968	0.7468	3.6145	9.6500e-003	0.5882	0.0148	0.6030	0.1582	0.0136	0.1718	0.0000	652.8384	652.8384	0.0223	0.0000	653.3071

3.4 Building Construction - 2027

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	0.1695	1.5450	1.9985	3.3400e-003		0.0654	0.0654		0.0615	0.0615	0.0000	287.5443	287.5443	0.0675	0.0000	288.9616
Total	0.1695	1.5450	1.9985	3.3400e-003		0.0654	0.0654		0.0615	0.0615	0.0000	287.5443	287.5443	0.0675	0.0000	288.9616

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	0.1073	0.5185	1.7002	3.0000e-003	0.0815	0.0105	0.0920	0.0234	9.6200e-003	0.0330	0.0000	253.7094	253.7094	1.8200e-003	0.0000	253.7475
Worker	0.0763	0.1817	1.6631	6.2200e-003	0.4796	3.6900e-003	0.4833	0.1275	3.4300e-003	0.1309	0.0000	365.8773	365.8773	0.0191	0.0000	366.2789
Total	0.1836	0.7002	3.3633	9.2200e-003	0.5611	0.0142	0.5753	0.1509	0.0131	0.1639	0.0000	619.5867	619.5867	0.0209	0.0000	620.0264

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	0.1695	1.5450	1.9984	3.3400e-003		0.0654	0.0654		0.0615	0.0615	0.0000	287.5440	287.5440	0.0675	0.0000	288.9612
Total	0.1695	1.5450	1.9984	3.3400e-003		0.0654	0.0654		0.0615	0.0615	0.0000	287.5440	287.5440	0.0675	0.0000	288.9612

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	0.1073	0.5185	1.7002	3.0000e-003	0.0815	0.0105	0.0920	0.0234	9.6200e-003	0.0330	0.0000	253.7094	253.7094	1.8200e-003	0.0000	253.7475
Worker	0.0763	0.1817	1.6631	6.2200e-003	0.4796	3.6900e-003	0.4833	0.1275	3.4300e-003	0.1309	0.0000	365.8773	365.8773	0.0191	0.0000	366.2789
Total	0.1836	0.7002	3.3633	9.2200e-003	0.5611	0.0142	0.5753	0.1509	0.0131	0.1639	0.0000	619.5867	619.5867	0.0209	0.0000	620.0264

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3800e-003	0.0505	0.0857	1.3000e-004		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	11.7560	11.7560	3.8000e-003	0.0000	11.8359
Paving	2.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.5000e-003	0.0505	0.0857	1.3000e-004		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	11.7560	11.7560	3.8000e-003	0.0000	11.8359

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	1.8000e-004	4.2000e-004	3.8500e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8477	0.8477	4.0000e-005	0.0000	0.8487
Total	1.8000e-004	4.2000e-004	3.8500e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8477	0.8477	4.0000e-005	0.0000	0.8487

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3800e-003	0.0505	0.0857	1.3000e-004		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	11.7560	11.7560	3.8000e-003	0.0000	11.8358
Paving	2.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.5000e-003	0.0505	0.0857	1.3000e-004		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	11.7560	11.7560	3.8000e-003	0.0000	11.8358

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	1.8000e-004	4.2000e-004	3.8500e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8477	0.8477	4.0000e-005	0.0000	0.8487
Total	1.8000e-004	4.2000e-004	3.8500e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8477	0.8477	4.0000e-005	0.0000	0.8487

3.5 Paving - 2028

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	0.0197	0.1853	0.3141	4.9000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	43.1054	43.1054	0.0139	0.0000	43.3981

Paving	7.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0275	0.1853	0.3141	4.9000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	43.1054	43.1054	0.0139	0.0000	43.3981

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	1.5000e-003	0.0138	5.0000e-005	4.0700e-003	3.0000e-005	4.1100e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.0844	3.0844	1.6000e-004	0.0000	3.0877
Total	6.3000e-004	1.5000e-003	0.0138	5.0000e-005	4.0700e-003	3.0000e-005	4.1100e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.0844	3.0844	1.6000e-004	0.0000	3.0877

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	0.0197	0.1853	0.3141	4.9000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	43.1053	43.1053	0.0139	0.0000	43.3981
Paving	7.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0275	0.1853	0.3141	4.9000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	43.1053	43.1053	0.0139	0.0000	43.3981

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	1.5000e-003	0.0138	5.0000e-005	4.0700e-003	3.0000e-005	4.1100e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.0844	3.0844	1.6000e-004	0.0000	3.0877
Total	6.3000e-004	1.5000e-003	0.0138	5.0000e-005	4.0700e-003	3.0000e-005	4.1100e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.0844	3.0844	1.6000e-004	0.0000	3.0877

3.6 Architectural Coating - 2028
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	3.5358					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1573
Total	3.5406	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1573

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	3.3100e-003	7.8700e-003	0.0723	2.8000e-004	0.0214	1.7000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003	0.0000	16.2255	16.2255	8.4000e-004	0.0000	16.2432
Total	3.3100e-003	7.8700e-003	0.0723	2.8000e-004	0.0214	1.7000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003	0.0000	16.2255	16.2255	8.4000e-004	0.0000	16.2432

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	3.5358					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1573
Total	3.5406	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1573

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	3.3100e-003	7.8700e-003	0.0723	2.8000e-004	0.0214	1.7000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003	0.0000	16.2255	16.2255	8.4000e-004	0.0000	16.2432
Total	3.3100e-003	7.8700e-003	0.0723	2.8000e-004	0.0214	1.7000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003	0.0000	16.2255	16.2255	8.4000e-004	0.0000	16.2432

CalEEMod Outputs

***Unmitigated Project Operations - Winter, Summer,
Annual, and Mitigation***

Roberts Ranch - Buildout Operations
Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 - not mitigation)

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Energy	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
Mobile	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.3846	96,245.3846	3.3278		96,315.2678
Total	140.7605	121.9570	755.7611	1.7443	75.8392	25.5416	101.3808	20.2702	25.3680	45.6381	3,264.8616	110,442.6605	113,707.5221	18.9719	0.2582	114,185.9575

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Energy	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
Mobile	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.3846	96,245.3846	3.3278		96,315.2678
Total	140.4467	119.2760	754.6203	1.7272	75.8392	25.3248	101.1641	20.2702	25.1512	45.4214	3,264.8616	107,020.0843	110,284.9459	18.9063	0.1954	110,742.5520

	ROG	NOx	CO	SO2	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	0.22	2.20	0.15	0.98	0.00	0.85	0.21	0.00	0.85	0.47	0.00	3.10	3.01	0.35	24.31	3.02

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.3846	96,245.3846	3.3278		96,315.2678
Unmitigated	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.3846	96,245.3846	3.3278		96,315.2678

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331
Total	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
NaturalGas Unmitigated	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	75882.5	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Other Asphalt Surfaces	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
Single Family Housing	46.7906	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Unmitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317

Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710	
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016		3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317
Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

**Roberts Ranch - Buildout Operations
Solano-Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 - not mitigation)

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Energy	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
Mobile	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150
Total	139.5557	108.5321	670.1358	1.8400	75.8392	25.5359	101.3751	20.2702	25.3627	45.6329	3,264.8616	117,053.9347	120,318.7963	18.9659	0.2582	120,797.1046

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Energy	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
Mobile	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150
Total	139.2419	105.8511	668.9949	1.8228	75.8392	25.3191	101.1584	20.2702	25.1460	45.4161	3,264.8616	113,631.3585	116,896.2201	18.9003	0.1954	117,353.6992

	ROG	NOx	CO	SO2	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	0.22	2.47	0.17	0.93	0.00	0.85	0.21	0.00	0.85	0.48	0.00	2.92	2.84	0.35	24.31	2.85

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150
Unmitigated	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331
Total	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
NaturalGas Unmitigated	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	75882.5	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Other Asphalt Surfaces	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
Single Family Housing	46.7906	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Unmitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317

Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710	
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016		3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317
Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

**Roberts Ranch - Buildout Operations
Solano-Sacramento County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 - not mitigation)

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

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	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112
Energy	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	2,736.3986	2,736.3986	0.1014	0.0422	2,751.6117
Mobile	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078
Waste						0.0000	0.0000		0.0000	0.0000	183.9849	0.0000	183.9849	10.8732	0.0000	412.3221
Water						0.0000	0.0000		0.0000	0.0000	16.2262	120.7002	136.9265	1.6736	0.0408	184.7203
Total	22.5900	19.6890	93.8184	0.2451	12.6178	1.4282	14.0460	3.3818	1.3989	4.7806	321.6463	18,262.7238	18,584.3701	13.7467	0.0865	18,899.8731

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	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112
Energy	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	2,139.5856	2,139.5856	0.0888	0.0315	2,151.2011
Mobile	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078
Waste						0.0000	0.0000		0.0000	0.0000	45.9962	0.0000	45.9962	2.7183	0.0000	103.0805
Water						0.0000	0.0000		0.0000	0.0000	12.9810	92.3692	105.3502	1.3386	0.0326	143.5646
Total	22.5327	19.1997	93.6102	0.2419	12.6178	1.3886	14.0064	3.3818	1.3593	4.7411	180.4124	17,637.5797	17,817.9920	5.2442	0.0676	17,949.0651

	ROG	NOx	CO	SO2	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	0.25	2.49	0.22	1.28	0.00	2.77	0.28	0.00	2.83	0.83	43.91	3.42	4.12	61.85	21.91	5.03

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078
Unmitigated	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331
Total	7,473.20	7,873.55	6,845.20	33,611,331	33,611,331

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,228.2074	1,228.2074	0.0713	0.0148	1,234.2765
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,258.3746	1,258.3746	0.0730	0.0151	1,264.5927
NaturalGas Mitigated	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246
NaturalGas Unmitigated	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190

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					
Other Asphalt Surfaces	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
Single Family Housing	2.76971e+007	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	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
Single Family Housing	1.70786e+007	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.55226e+006	1,258.3746	0.0730	0.0151	1,264.5927
Total		1,258.3746	0.0730	0.0151	1,264.5927

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.41915e+006	1,228.2074	0.0713	0.0148	1,234.2765
Total		1,228.2074	0.0713	0.0148	1,234.2765

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112
Unmitigated	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112

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	1.2907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	14.6541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6315	0.0907	5.5604	0.0181		0.9203	0.9203		0.9202	0.9202	121.4351	191.6746	313.1097	0.5714	3.5100e-003	326.1976
Landscaping	0.1749	0.0671	5.8237	3.1000e-004		0.0323	0.0323		0.0323	0.0323	0.0000	9.5221	9.5221	9.1200e-003	0.0000	9.7136
Total	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112

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	1.2907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	14.6541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6315	0.0907	5.5604	0.0181		0.9203	0.9203		0.9202	0.9202	121.4351	191.6746	313.1097	0.5714	3.5100e-003	326.1976
Landscaping	0.1749	0.0671	5.8237	3.1000e-004		0.0323	0.0323		0.0323	0.0323	0.0000	9.5221	9.5221	9.1200e-003	0.0000	9.7136
Total	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	105.3502	1.3386	0.0326	143.5646

Unmitigated	136.9265	1.6736	0.0408	184.7203
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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 40.844	32.3994	1.8800e-003	3.9000e-004	32.5595
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	51.1459 / 32.2442	104.5271	1.6717	0.0404	152.1609
Total		136.9265	1.6736	0.0408	184.7203

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 32.6752	25.9195	1.5000e-003	3.1000e-004	26.0476
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	40.9167 / 25.7953	79.4307	1.3371	0.0323	117.5170
Total		105.3502	1.3386	0.0326	143.5646

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	183.9849	10.8732	0.0000	412.3221
Mitigated	45.9962	2.7183	0.0000	103.0805

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.95	0.5988	0.0354	0.0000	1.3420
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	903.42	183.3861	10.8378	0.0000	410.9801
Total		183.9849	10.8732	0.0000	412.3221

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.7375	0.1497	8.8500e-003	0.0000	0.3355
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	225.855	45.8465	2.7095	0.0000	102.7450
Total		45.9962	2.7183	0.0000	103.0805

9.0 Operational Offroad

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

Roberts Ranch - Buildout Operations Solano-Sacramento County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	2.40	2.41	2.38	2.40
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	38.34	38.34	38.34	38.40	38.34	38.34	0.00	38.34	38.34	38.33	38.34	38.34
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	23.47	23.06	20.01	20.12	22.28
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.22	0.51		
No	Land Use	Improve Walkability Design	0.00			

No	Land Use	Improve Destination Accessibility	0.00		
No	Land Use	Increase Transit Accessibility	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00		
	Land Use	Land Use SubTotal	0.00		
No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			

	Commute	Commute Subtotal	0.00		
No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	46.00	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00

Refrigerator	15.00
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Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	20.00	20.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	75.00

CalEEMod Outputs

***Mitigated Project Operations - Winter, Summer,
Annual, and Mitigation***

**Roberts Ranch - Buildout Operations - Mitigated
Solano-Sacramento County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 -

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Area Mitigation - Only natural gas hearth mitigation

Mobile Land Use Mitigation - Traffic mitigation includes improvement of pedestrian network and 50% streets and intersections assumed to have traffic calming measures

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5,021.6798	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782	0.0000	2,919.3813	2,919.3813	0.1740	0.0000	2,923.0362
Total	5,021.6798	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782	0.0000	2,919.3813	2,919.3813	0.1740	0.0000	2,923.0362

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5,021.6798	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782	0.0000	2,919.3813	2,919.3813	0.1740	0.0000	2,923.0362
Total	5,021.6798	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782	0.0000	2,919.3813	2,919.3813	0.1740	0.0000	2,923.0362

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

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
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Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.861 6	5,269.919 4	8,534.7810	15.4730	0.0945	8,889.002 7
Energy	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.356 5	8,927.3565	0.1711	0.1637	8,981.686 9
Mobile	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.38 46	96,245.384 6	3.3278		96,315.26 78
Total	140.7605	121.9570	755.7611	1.7443	75.8392	25.5416	101.3808	20.2702	25.3680	45.6381	3,264.861 6	110,442.6 605	113,707.52 21	18.9719	0.2582	114,185.9 575

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.919 4	5,269.9194	0.2105	0.0945	5,303.627 3
Energy	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.780 3	5,504.7803	0.1055	0.1009	5,538.281 5
Mobile	34.3825	107.3501	537.4468	1.1925	72.0473	2.0667	74.1140	19.2567	1.9047	21.1614		91,525.28 90	91,525.289 0	3.1708		91,591.87 55
Total	124.6716	112.4075	604.0151	1.2235	72.0473	3.1008	75.1480	19.2567	2.9353	22.1920	0.0000	102,299.9 888	102,299.98 88	3.4868	0.1954	102,433.7 843

	ROG	NOx	CO	SO2	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	11.43	7.83	20.08	29.86	5.00	87.86	25.88	5.00	88.43	51.37	100.00	7.37	10.03	81.62	24.31	10.29

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2019	1/14/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,861,325; Residential Outdoor: 953,775; Non-Residential Indoor: 3,508,758; Non-Residential Outdoor: 1,169,586

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	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
Architectural Coating	0	253.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5,020.9175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	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	5,020.9175	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7622	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782		2,919.3813	2,919.3813	0.1740		2,923.0362
Total	0.7622	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782		2,919.3813	2,919.3813	0.1740		2,923.0362

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5,020.9175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	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	5,020.9175	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7622	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782		2,919.3813	2,919.3813	0.1740		2,923.0362
Total	0.7622	1.9961	16.2890	0.0394	3.2316	0.0228	3.2544	0.8570	0.0212	0.8782		2,919.3813	2,919.3813	0.1740		2,923.0362

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	34.3825	107.3501	537.4468	1.1925	72.0473	2.0667	74.1140	19.2567	1.9047	21.1614		91,525.2890	91,525.2890	3.1708		91,591.8755
Unmitigated	35.2269	112.0066	552.4585	1.2539	75.8392	2.1711	78.0103	20.2702	2.0009	22.2711		96,245.3846	96,245.3846	3.3278		96,315.2678

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6,845.20	33,611,331	31,930,764
Total	7,473.20	7,873.55	6,845.20	33,611,331	31,930,764

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
NaturalGas Unmitigated	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	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

Single Family Housing	75882.5	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	46.7906	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.9194	5,269.9194	0.2105	0.0945	5,303.6273
Unmitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317
Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4724	2.0000e-005	0.0258	0.0000		0.3264	0.3264		0.3229	0.3229	0.0000	5,153.2941	5,153.2941	0.0988	0.0945	5,184.6562
Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.9194	5,269.9194	0.2105	0.0945	5,303.6273

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

**Roberts Ranch - Buildout Operations - Mitigated
Solano-Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 - not mitigation)

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Area Mitigation - Only natural gas hearth mitigation

Mobile Land Use Mitigation - Traffic mitigation includes improvement of pedestrian network and 50% streets and intersections assumed to have traffic calming measures

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027
Energy	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
Mobile	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150
Total	139.5557	108.5321	670.1358	1.8400	75.8392	25.5359	101.3751	20.2702	25.3627	45.6329	3,264.8616	117,053.9347	120,318.7963	18.9659	0.2582	120,797.1046

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.9194	5,269.9194	0.2105	0.0945	5,303.6273
Energy	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
Mobile	33.1588	94.5192	449.5859	1.2833	72.0473	2.0610	74.1083	19.2567	1.8995	21.1562		97,812.2969	97,812.2969	3.1647		97,878.7564
Total	123.4479	99.5766	516.1542	1.3143	72.0473	3.0951	75.1423	19.2567	2.9301	22.1868	0.0000	108,586.9967	108,586.9967	3.4807	0.1954	108,720.6652

	ROG	NOx	CO	SO2	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	11.54	8.25	22.98	28.57	5.00	87.88	25.88	5.00	88.45	51.38	100.00	7.23	9.75	81.65	24.31	10.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	33.1588	94.5192	449.5859	1.2833	72.0473	2.0610	74.1083	19.2567	1.8995	21.1562		97,812.2969	97,812.2969	3.1647		97,878.7564
Unmitigated	34.0220	98.5816	466.8331	1.3495	75.8392	2.1654	78.0046	20.2702	1.9957	22.2658		102,856.6588	102,856.6588	3.3217		102,926.4150

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6,845.20	33,611,331	31,930,764
Total	7,473.20	7,873.55	6,845.20	33,611,331	31,930,764

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
NaturalGas Unmitigated	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	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
Single Family Housing	75882.5	0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8183	6.9931	2.9758	0.0446		0.5654	0.5654		0.5654	0.5654		8,927.3565	8,927.3565	0.1711	0.1637	8,981.6869

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Other Asphalt Surfaces	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
Single Family Housing	46.7906	0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.5046	4.3121	1.8349	0.0275		0.3486	0.3486		0.3486	0.3486		5,504.7803	5,504.7803	0.1055	0.1009	5,538.2815

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.9194	5,269.9194	0.2105	0.0945	5,303.6273
Unmitigated	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4032	2.2120	135.6193	0.4424		22.4460	22.4460		22.4426	22.4426	3,264.8616	5,153.2941	8,418.1557	15.3613	0.0945	8,770.0317

Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	104.7153	2.9573	200.3269	0.4458		22.8051	22.8051		22.8016	22.8016	3,264.8616	5,269.9194	8,534.7810	15.4730	0.0945	8,889.0027

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	7.0725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	80.2965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4724	2.0000e-005	0.0258	0.0000		0.3264	0.3264		0.3229	0.3229	0.0000	5,153.2941	5,153.2941	0.0988	0.0945	5,184.6562
Landscaping	1.9432	0.7453	64.7076	3.4200e-003		0.3590	0.3590		0.3590	0.3590		116.6253	116.6253	0.1117		118.9710
Total	89.7845	0.7454	64.7334	3.4200e-003		0.6854	0.6854		0.6820	0.6820	0.0000	5,269.9194	5,269.9194	0.2105	0.0945	5,303.6273

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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



**Roberts Ranch - Buildout Operations - Mitigated
Solano-Sacramento County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	19.42	Acre	19.42	845,935.20	0
City Park	34.28	Acre	34.28	1,493,236.80	0
Single Family Housing	785.00	Dwelling Unit	178.40	1,413,000.00	2151

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	56
Climate Zone	4	Operational Year		2025	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	499.66	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity based on 33% RPS by 2020

Land Use - ROW split into parks (25%) and paved uses (75%). Population assumes 2.74 people per household

Vehicle Trips - Adjusted trip generation and trip length to match the information provided by Kittelson and Associates. Changed trip types to primary to match VMT. Saturday and Sunday trip rates based on proportion to weekday.

Road Dust - 100% of roadways traversed in operations assumed to be paved

Woodstoves - Fireplaces assumed to be gas fueled rather than wood fueled. Default quantities also assumed.

Area Coating - Adjusted non-residential interior/exterior SF based on minimal coatings needed for City Park and paved surface uses

Energy Mitigation - Assumed compliance with 2016 Title 24 (28% improvement over 2013 Title 24, which was a 25% improvement over 2008 Title 24 -

Water Mitigation - 20% indoor/outdoor water conservation assumed by 2020

Waste Mitigation - 75% waste diversion consistent with AB 341 (not mitigation)

Area Mitigation - Only natural gas hearth mitigation

Mobile Land Use Mitigation - Traffic mitigation includes improvement of pedestrian network and 50% streets and intersections assumed to have traffic calming measures

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	3508763	0
tblConstructionPhase	NumDays	330.00	10.00
tblFireplaces	NumberGas	0.00	243.35
tblFireplaces	NumberWood	243.35	0.00
tblLandUse	LotAcreage	254.87	178.40
tblLandUse	Population	2,245.00	2,151.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblProjectCharacteristics	OperationalYear	2014	2025
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	12.41
tblVehicleTrips	HS_TL	7.10	12.41
tblVehicleTrips	HW_TL	16.80	12.41
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.03
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	8.72
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	9.52

2.0 Emissions Summary

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	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112
Energy	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	2,736.3986	2,736.3986	0.1014	0.0422	2,751.6117
Mobile	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078
Waste						0.0000	0.0000		0.0000	0.0000	183.9849	0.0000	183.9849	10.8732	0.0000	412.3221
Water						0.0000	0.0000		0.0000	0.0000	16.2262	120.7002	136.9265	1.6736	0.0408	184.7203
Total	22.5900	19.6890	93.8184	0.2451	12.6178	1.4282	14.0460	3.3818	1.3989	4.7806	321.6463	18,262.7238	18,584.3701	13.7467	0.0865	18,899.8731

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	16.1391	0.0671	5.8247	3.1000e-004		0.0457	0.0457		0.0456	0.0456	0.0000	201.1966	201.1966	0.0128	3.5100e-003	202.5547
Energy	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	2,139.5856	2,139.5856	0.0888	0.0315	2,151.2011
Mobile	5.5449	17.4972	79.3124	0.2078	11.9869	0.3545	12.3414	3.2127	0.3267	3.5394	0.0000	14,459.1409	14,459.1409	0.4936	0.0000	14,469.5066
Waste						0.0000	0.0000		0.0000	0.0000	45.9962	0.0000	45.9962	2.7183	0.0000	103.0805
Water						0.0000	0.0000		0.0000	0.0000	12.9810	92.3692	105.3502	1.3386	0.0326	143.5646
Total	21.7761	18.3512	85.4721	0.2131	11.9869	0.4638	12.4507	3.2127	0.4359	3.6485	58.9772	16,892.2923	16,951.2695	4.6521	0.0676	17,069.9074

	ROG	NOx	CO	SO2	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	3.60	6.79	8.90	13.04	5.00	67.53	11.36	5.00	68.84	23.68	81.66	7.50	8.79	66.16	21.91	9.68

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive 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	5.5449	17.4972	79.3124	0.2078	11.9869	0.3545	12.3414	3.2127	0.3267	3.5394	0.0000	14,459.1409	14,459.1409	0.4936	0.0000	14,469.5066
Unmitigated	5.6894	18.2550	81.8913	0.2185	12.6178	0.3724	12.9902	3.3818	0.3432	3.7250	0.0000	15,204.4283	15,204.4283	0.5181	0.0000	15,215.3078

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	7,473.20	7,873.55	6845.20	33,611,331	31,930,764
Total	7,473.20	7,873.55	6,845.20	33,611,331	31,930,764

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	12.41	12.41	12.41	42.90	19.50	37.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462538	0.066856	0.149688	0.150876	0.052865	0.006769	0.008798	0.086253	0.001104	0.000780	0.009361	0.000310	0.003802

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,228.2074	1,228.2074	0.0713	0.0148	1,234.2765
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,258.3746	1,258.3746	0.0730	0.0151	1,264.5927
NaturalGas Mitigated	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246
NaturalGas Unmitigated	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190

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					
Other Asphalt Surfaces	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
Single Family Housing	2.76971e+007	0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total		0.1494	1.2762	0.5431	8.1500e-003		0.1032	0.1032		0.1032	0.1032	0.0000	1,478.0240	1,478.0240	0.0283	0.0271	1,487.0190
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Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	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
Single Family Housing	1.70786e+007	0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0921	0.7870	0.3349	5.0200e-003		0.0636	0.0636		0.0636	0.0636	0.0000	911.3781	911.3781	0.0175	0.0167	916.9246

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.55226e+006	1,258.3746	0.0730	0.0151	1,264.5927
Total		1,258.3746	0.0730	0.0151	1,264.5927

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.41915e+006	1,228.2074	0.0713	0.0148	1,234.2765
Total		1,228.2074	0.0713	0.0148	1,234.2765

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	16.1391	0.0671	5.8247	3.1000e-004		0.0457	0.0457		0.0456	0.0456	0.0000	201.1966	201.1966	0.0128	3.5100e-003	202.5547
Unmitigated	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112

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
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SubCategory	tons/yr								MT/yr							
Architectural Coating	1.2907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	14.6541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6315	0.0907	5.5604	0.0181		0.9203	0.9203		0.9202	0.9202	121.4351	191.6746	313.1097	0.5714	3.5100e-003	326.1976
Landscaping	0.1749	0.0671	5.8237	3.1000e-004		0.0323	0.0323		0.0323	0.0323	0.0000	9.5221	9.5221	9.1200e-003	0.0000	9.7136
Total	16.7513	0.1578	11.3841	0.0185		0.9526	0.9526		0.9525	0.9525	121.4351	201.1966	322.6318	0.5805	3.5100e-003	335.9112

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	1.2907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	14.6541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0194	0.0000	1.0600e-003	0.0000		0.0134	0.0134		0.0132	0.0132	0.0000	191.6746	191.6746	3.6700e-003	3.5100e-003	192.8411
Landscaping	0.1749	0.0671	5.8237	3.1000e-004		0.0323	0.0323		0.0323	0.0323	0.0000	9.5221	9.5221	9.1200e-003	0.0000	9.7136
Total	16.1391	0.0671	5.8247	3.1000e-004		0.0457	0.0457		0.0456	0.0456	0.0000	201.1966	201.1966	0.0128	3.5100e-003	202.5547

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Mitigated	105.3502	1.3386	0.0326	143.5646
Unmitigated	136.9265	1.6736	0.0408	184.7203

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 40.844	32.3994	1.8800e-003	3.9000e-004	32.5595
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	51.1459 / 32.2442	104.5271	1.6717	0.0404	152.1609
Total		136.9265	1.6736	0.0408	184.7203

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 32.6752	25.9195	1.5000e-003	3.1000e-004	26.0476
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	40.9167 / 25.7953	79.4307	1.3371	0.0323	117.5170

Total		105.3502	1.3386	0.0326	143.5646
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	183.9849	10.8732	0.0000	412.3221
Mitigated	45.9962	2.7183	0.0000	103.0805

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.95	0.5988	0.0354	0.0000	1.3420
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	903.42	183.3861	10.8378	0.0000	410.9801
Total		183.9849	10.8732	0.0000	412.3221

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.7375	0.1497	8.8500e-003	0.0000	0.3355
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	225.855	45.8465	2.7095	0.0000	102.7450
Total		45.9962	2.7183	0.0000	103.0805

9.0 Operational Offroad

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

Roberts Ranch - Buildout Operations - Mitigated
Solano-Sacramento County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	2.40	2.41	2.38	2.40
Hearth	96.93	100.00	99.98	100.00	98.55	98.56	100.00	0.00	38.78	99.36	0.00	40.88
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.54	4.15	3.15	4.89	4.82	4.81	0.00	4.90	4.90	4.72	0.00	4.90
Natural Gas	38.34	38.34	38.34	38.40	38.34	38.34	0.00	38.34	38.34	38.33	38.34	38.34
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	23.47	23.06	20.01	20.12	22.28
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.22	0.51		
No	Land Use	Improve Walkability Design	0.00			

No	Land Use	Improve Destination Accessibility	0.00		
No	Land Use	Increase Transit Accessibility	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00		
	Land Use	Land Use SubTotal	0.00		
Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off- Site	
Yes	Neighborhood Enhancements	Provide Traffic Calming Measures	0.50	50.00	50.00
No	Neighborhood Enhancements	Implement NEV Network	0.01		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.05		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.05		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			

	Commute	Commute Subtotal	0.00		
No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.05		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	46.00	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00

Refrigerator	15.00
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Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	20.00	20.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	75.00