

APPENDIX A

Air Quality Modeling Files

555 Bailey Avenue Water Line - Santa Clara County, Annual

555 Bailey Avenue Water Line Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	0.60	1000sqft	0.01	600.00	0
Other Asphalt Surfaces	5.00	1000sqft	0.11	5,000.00	0
Other Non-Asphalt Surfaces	130.00	1000sqft	2.98	130,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - assumes 3,250 LF of pipe with 20-foot setbacks for disturbance on either side

Construction Phase - per applicant; assumes overlapping pumphouse construction, paving, and trenching activities

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Off-road Equipment - per applicant

Trips and VMT - per applicant; added vendor water truck trips

Grading - per site

Vehicle Trips - no operational trips

Construction Off-road Equipment Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Off-road Equipment - per applicant

Water And Wastewater - no additional water demand

Solid Waste - no additional waste

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	4.00
tblConstructionPhase	PhaseEndDate	2/28/2022	7/21/2021
tblConstructionPhase	PhaseEndDate	4/12/2021	4/14/2021
tblConstructionPhase	PhaseEndDate	3/24/2022	7/6/2021
tblConstructionPhase	PhaseStartDate	4/13/2021	6/10/2021
tblConstructionPhase	PhaseStartDate	3/1/2022	7/1/2021
tblGrading	AcresOfGrading	0.00	4.00
tblOffRoadEquipment	HorsePower	81.00	158.00
tblOffRoadEquipment	LoadFactor	0.73	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.74	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	175.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	12.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	12.00
tblTripsAndVMT	WorkerTripNumber	5.00	12.00
tblTripsAndVMT	WorkerTripNumber	57.00	12.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	WD_TR	1.50	0.00
tblWater	IndoorWaterUseRate	138,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0300	0.2981	0.3419	6.2000e-004	0.0111	0.0148	0.0259	2.6700e-003	0.0137	0.0163	0.0000	55.1786	55.1786	0.0119	0.0000	55.4748
Maximum	0.0300	0.2981	0.3419	6.2000e-004	0.0111	0.0148	0.0259	2.6700e-003	0.0137	0.0163	0.0000	55.1786	55.1786	0.0119	0.0000	55.4748

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	0.0300	0.2981	0.3419	6.2000e-004	9.9100e-003	0.0148	0.0247	2.5500e-003	0.0137	0.0162	0.0000	55.1786	55.1786	0.0119	0.0000	55.4748
Maximum	0.0300	0.2981	0.3419	6.2000e-004	9.9100e-003	0.0148	0.0247	2.5500e-003	0.0137	0.0162	0.0000	55.1786	55.1786	0.0119	0.0000	55.4748

	ROG	NOx	CO	SO2	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	10.56	0.00	4.53	4.49	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2021	6-30-2021	0.2349	0.2349
2	7-1-2021	9-30-2021	0.0930	0.0930
		Highest	0.2349	0.2349

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0143	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003
Energy	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	2.2864	2.2864	8.0000e-005	3.0000e-005	2.2971
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	1.7200e-003	4.8200e-003	4.3900e-003	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.7997	0.7997	1.1000e-004	0.0000	0.8025
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0161	5.6100e-003	6.2900e-003	1.0000e-005	0.0000	3.1000e-004	3.1000e-004	0.0000	3.1000e-004	3.1000e-004	0.0000	3.0885	3.0885	2.0000e-004	3.0000e-005	3.1021

Mitigated Operational

[illegible]

Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0161	5.6100e-003	6.2900e-003	1.0000e-005	0.0000	3.1000e-004	3.1000e-004	0.0000	3.1000e-004	3.1000e-004	0.0000	3.0885	3.0885	2.0000e-004	3.0000e-005	3.1021

	ROG	NOx	CO	SO2	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	Grading	Grading	4/1/2021	4/14/2021	5	10	
2	Pumphouse Construction	Building Construction	6/10/2021	7/21/2021	5	30	
3	Paving	Paving	7/1/2021	7/6/2021	5	4	
4	Trenching	Trenching	4/1/2021	8/4/2021	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pumphouse Construction	Cranes	0	7.00	231	0.29
Pumphouse Construction	Forklifts	0	8.00	89	0.20
Pumphouse Construction	Generator Sets	0	8.00	84	0.74

Pumphouse Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pumphouse Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	4.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

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
Grading	5	12.00	2.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Pumphouse Construction	1	12.00	22.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	12.00	2.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	12.00	2.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	6.0500e-003	0.0515	0.0715	1.2000e-004		2.7100e-003	2.7100e-003		2.5800e-003	2.5800e-003	0.0000	10.4579	10.4579	1.8600e-003	0.0000	10.5043
Total	6.0500e-003	0.0515	0.0715	1.2000e-004	2.1200e-003	2.7100e-003	4.8300e-003	2.3000e-004	2.5800e-003	2.8100e-003	0.0000	10.4579	10.4579	1.8600e-003	0.0000	10.5043

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	3.0000e-005	9.8000e-004	2.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2391	0.2391	1.0000e-005	0.0000	0.2394
Worker	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	2.1000e-004	1.1100e-003	1.6300e-003	0.0000	5.4000e-004	0.0000	5.4000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.6330	0.6330	2.0000e-005	0.0000	0.6335

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					9.5000e-004	0.0000	9.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.0515	0.0715	1.2000e-004		2.7100e-003	2.7100e-003		2.5800e-003	2.5800e-003	0.0000	10.4579	10.4579	1.8600e-003	0.0000	10.5043
Total	6.0500e-003	0.0515	0.0715	1.2000e-004	9.5000e-004	2.7100e-003	3.6600e-003	1.0000e-004	2.5800e-003	2.6800e-003	0.0000	10.4579	10.4579	1.8600e-003	0.0000	10.5043

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	3.0000e-005	9.8000e-004	2.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2391	0.2391	1.0000e-005	0.0000	0.2394
Worker	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	2.1000e-004	1.1100e-003	1.6300e-003	0.0000	5.4000e-004	0.0000	5.4000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.6330	0.6330	2.0000e-005	0.0000	0.6335

3.3 Pumphouse 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	2.8100e-003	0.0284	0.0339	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.0946	4.0946	1.3200e-003	0.0000	4.1277
Total	2.8100e-003	0.0284	0.0339	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.0946	4.0946	1.3200e-003	0.0000	4.1277

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	1.0200e-003	0.0325	8.6500e-003	8.0000e-005	1.9600e-003	7.0000e-005	2.0300e-003	5.7000e-004	7.0000e-005	6.3000e-004	0.0000	7.8897	7.8897	3.6000e-004	0.0000	7.8987
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	1.5700e-003	0.0329	0.0128	9.0000e-005	3.3900e-003	8.0000e-005	3.4700e-003	9.5000e-004	8.0000e-005	1.0200e-003	0.0000	9.0715	9.0715	3.9000e-004	0.0000	9.0811

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8100e-003	0.0284	0.0339	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.0946	4.0946	1.3200e-003	0.0000	4.1277
Total	2.8100e-003	0.0284	0.0339	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.0946	4.0946	1.3200e-003	0.0000	4.1277

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	1.0200e-003	0.0325	8.6500e-003	8.0000e-005	1.9600e-003	7.0000e-005	2.0300e-003	5.7000e-004	7.0000e-005	6.3000e-004	0.0000	7.8897	7.8897	3.6000e-004	0.0000	7.8987
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	1.5700e-003	0.0329	0.0128	9.0000e-005	3.3900e-003	8.0000e-005	3.4700e-003	9.5000e-004	8.0000e-005	1.0200e-003	0.0000	9.0715	9.0715	3.9000e-004	0.0000	9.0811

3.4 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	3.8000e-004	3.8200e-003	4.1400e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.5035	0.5035	1.6000e-004	0.0000	0.5076
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.2000e-004	3.8200e-003	4.1400e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.5035	0.5035	1.6000e-004	0.0000	0.5076

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	1.0000e-005	3.9000e-004	1.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0956	0.0956	0.0000	0.0000	0.0957
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1576	0.1576	0.0000	0.0000	0.1577
Total	8.0000e-005	4.4000e-004	6.5000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2532	0.2532	0.0000	0.0000	0.2534

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8000e-004	3.8200e-003	4.1400e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.5035	0.5035	1.6000e-004	0.0000	0.5076
Paving	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.2000e-004	3.8200e-003	4.1400e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.5035	0.5035	1.6000e-004	0.0000	0.5076

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	1.0000e-005	3.9000e-004	1.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0956	0.0956	0.0000	0.0000	0.0957
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1576	0.1576	0.0000	0.0000	0.1577
Total	8.0000e-005	4.4000e-004	6.5000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2532	0.2532	0.0000	0.0000	0.2534

3.5 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					
Off-Road	0.0168	0.1699	0.2026	2.8000e-004		0.0100	0.0100		9.2200e-003	9.2200e-003	0.0000	24.4679	24.4679	7.9100e-003	0.0000	24.6657

Total	0.0168	0.1699	0.2026	2.8000e-004		0.0100	0.0100		9.2200e-003	9.2200e-003	0.0000	24.4679	24.4679	7.9100e-003	0.0000	24.6657
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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	2.8000e-004	8.8600e-003	2.3600e-003	2.0000e-005	5.4000e-004	2.0000e-005	5.5000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.1518	2.1518	1.0000e-004	0.0000	2.1542
Worker	1.6600e-003	1.1500e-003	0.0124	4.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.5453	3.5453	8.0000e-005	0.0000	3.5473
Total	1.9400e-003	0.0100	0.0147	6.0000e-005	4.8200e-003	5.0000e-005	4.8600e-003	1.2900e-003	4.0000e-005	1.3300e-003	0.0000	5.6971	5.6971	1.8000e-004	0.0000	5.7015

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	0.0168	0.1699	0.2026	2.8000e-004		0.0100	0.0100		9.2200e-003	9.2200e-003	0.0000	24.4679	24.4679	7.9100e-003	0.0000	24.6657
Total	0.0168	0.1699	0.2026	2.8000e-004		0.0100	0.0100		9.2200e-003	9.2200e-003	0.0000	24.4679	24.4679	7.9100e-003	0.0000	24.6657

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	2.8000e-004	8.8600e-003	2.3600e-003	2.0000e-005	5.4000e-004	2.0000e-005	5.5000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.1518	2.1518	1.0000e-004	0.0000	2.1542
Worker	1.6600e-003	1.1500e-003	0.0124	4.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.5453	3.5453	8.0000e-005	0.0000	3.5473
Total	1.9400e-003	0.0100	0.0147	6.0000e-005	4.8200e-003	5.0000e-005	4.8600e-003	1.2900e-003	4.0000e-005	1.3300e-003	0.0000	5.6971	5.6971	1.8000e-004	0.0000	5.7015

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

General Heavy Industry	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Other Asphalt Surfaces	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Other Non-Asphalt Surfaces	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.4418	1.4418	7.0000e-005	1.0000e-005	1.4474
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.4418	1.4418	7.0000e-005	1.0000e-005	1.4474

NaturalGas Mitigated	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497
NaturalGas Unmitigated	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	15828	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497
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
Other Non-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
Total		9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	15828	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497
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
Other Non-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
Total		9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8446	0.8446	2.0000e-005	2.0000e-005	0.8497

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	4956	1.4418	7.0000e-005	1.0000e-005	1.4474
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.4418	7.0000e-005	1.0000e-005	1.4474

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	4956	1.4418	7.0000e-005	1.0000e-005	1.4474
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		1.4418	7.0000e-005	1.0000e-005	1.4474

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	0.0143	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003
Unmitigated	0.0143	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003
Total	0.0143	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003

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
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SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003
Total	0.0143	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4200e-003	2.4200e-003	1.0000e-005	0.0000	2.5800e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000

Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000

Unmitigated	0.0000	0.0000	0.0000	0.0000
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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Fire Pump	1	0.5	12	175	0.73	Diesel

Boilers

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

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Fire Pump - Diesel (175 - 300 HP)	1.7200e-003	4.8200e-003	4.3900e-003	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.7997	0.7997	1.1000e-004	0.0000	0.8025
Total	1.7200e-003	4.8200e-003	4.3900e-003	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	0.7997	0.7997	1.1000e-004	0.0000	0.8025

11.0 Vegetation
