

Appendix AQ

Air Quality and Greenhouse Gas Emissions Analysis

Forbes Blvd Office and R&D - San Mateo County, Summer

Forbes Blvd Office and R&D
San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	128.74	1000sqft	1.48	128,737.00	0
Unenclosed Parking with Elevator	84.28	1000sqft	1.48	84,280.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	CH4 Intensity (lb/MWhr)	0.014	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Forbes Blvd Office and R&D - San Mateo County, Summer

Project Characteristics - Per Peninsula Clean Energy Factors

Land Use - Lot size is 2.96

Construction Phase - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Demolition -

Grading - Project site size

Vehicle Trips - Per project traffic analysis

Energy Use -

Construction Off-road Equipment Mitigation -

Energy Mitigation - Per current requirements

Water Mitigation - per 2016 standards

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	64,370.00	64,354.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	193,109.00	193,062.00
tblAreaCoating	Area_Nonresidential_Exterior	64370	64354
tblAreaCoating	Area_Nonresidential_Interior	193109	193062
tblConstructionPhase	NumDays	10.00	88.00
tblConstructionPhase	NumDays	220.00	282.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	6.00	20.00

Forbes Blvd Office and R&D - San Mateo County, Summer

tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	3.00	21.00
tblGrading	AcresOfGrading	10.00	2.96
tblGrading	AcresOfGrading	31.50	2.96
tblLandUse	LotAcreage	2.96	1.48
tblLandUse	LotAcreage	1.93	1.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	1.90	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	1.11	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	8.11	6.84
tblWater	IndoorWaterUseRate	31,650,339.38	31,635,588.56

2.0 Emissions Summary

Forbes Blvd Office and R&D - San Mateo County, Summer

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					
2020	2.6304	27.7229	21.2586	0.0413	6.3269	1.3385	7.5809	3.3664	1.2477	4.5201	0.0000	4,129.3095	4,129.3095	1.0123	0.0000	4,153.2101
2021	4.4350	34.1863	30.9277	0.0639	6.3269	1.5515	7.4785	3.3664	1.5068	4.4259	0.0000	6,053.0990	6,053.0990	1.0118	0.0000	6,074.2023
2022	15.9785	31.3717	30.4564	0.0636	0.8688	1.3441	2.2129	0.2358	1.3054	1.5412	0.0000	6,019.5541	6,019.5541	0.8235	0.0000	6,040.1412
Maximum	15.9785	34.1863	30.9277	0.0639	6.3269	1.5515	7.5809	3.3664	1.5068	4.5201	0.0000	6,053.0990	6,053.0990	1.0123	0.0000	6,074.2023

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					
2020	2.6304	27.7229	21.2586	0.0413	6.3269	1.3385	7.5809	3.3664	1.2477	4.5201	0.0000	4,129.3095	4,129.3095	1.0123	0.0000	4,153.2101
2021	4.4350	34.1863	30.9277	0.0639	6.3269	1.5515	7.4785	3.3664	1.5068	4.4259	0.0000	6,053.0990	6,053.0990	1.0118	0.0000	6,074.2023
2022	15.9785	31.3717	30.4564	0.0636	0.8688	1.3441	2.2129	0.2358	1.3054	1.5412	0.0000	6,019.5541	6,019.5541	0.8235	0.0000	6,040.1412
Maximum	15.9785	34.1863	30.9277	0.0639	6.3269	1.5515	7.5809	3.3664	1.5068	4.5201	0.0000	6,053.0990	6,053.0990	1.0123	0.0000	6,074.2023

Forbes Blvd Office and R&D - San Mateo County, Summer

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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Energy	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943
Mobile	0.9690	2.3648	9.9807	0.0411	4.6897	0.0252	4.7150	1.2560	0.0235	1.2795		4,167.2614	4,167.2614	0.1407		4,170.7781
Total	4.2273	3.2208	10.7212	0.0462	4.6897	0.0904	4.7801	1.2560	0.0886	1.3446		5,194.2994	5,194.2994	0.1605	0.0188	5,203.9220

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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Energy	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
Mobile	0.9690	2.3648	9.9807	0.0411	4.6897	0.0252	4.7150	1.2560	0.0235	1.2795		4,167.2614	4,167.2614	0.1407		4,170.7781
Total	4.2070	3.0356	10.5657	0.0451	4.6897	0.0763	4.7660	1.2560	0.0745	1.3306		4,972.0958	4,972.0958	0.1562	0.0148	4,980.3979

Forbes Blvd Office and R&D - San Mateo County, Summer

	ROG	NOx	CO	SO2	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	0.48	5.75	1.45	2.40	0.00	15.57	0.29	0.00	15.88	1.05	0.00	4.28	4.28	2.65	21.67	4.30

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/2/2020	5	45	
2	Site Preparation	Site Preparation	11/20/2020	12/18/2020	5	21	
3	Grading	Grading	12/19/2020	1/15/2021	5	20	
4	Building Construction	Building Construction	2/1/2021	3/1/2022	5	282	
5	Paving	Paving	3/2/2022	5/2/2022	5	44	
6	Architectural Coating	Architectural Coating	5/3/2022	9/1/2022	5	88	

Acres of Grading (Site Preparation Phase): 2.96

Acres of Grading (Grading Phase): 2.96

Acres of Paving: 1.48

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 193,062; Non-Residential Outdoor: 64,354; Striped Parking Area: 5,057 (Architectural Coating – sqft)

OffRoad Equipment

Forbes Blvd Office and R&D - San Mateo County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Excavators	3	6.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Air Compressors	4	6.00	78	0.48
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	6	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Forklifts	1	6.00	89	0.20

Trips and VMT

Forbes Blvd Office and R&D - San Mateo County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	447.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	77.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1484	0.0000	2.1484	0.3253	0.0000	0.3253			0.0000			0.0000
Off-Road	2.4937	24.5653	19.5590	0.0319		1.3278	1.3278		1.2374	1.2374		3,072.4903	3,072.4903	0.8396		3,093.4795
Total	2.4937	24.5653	19.5590	0.0319	2.1484	1.3278	3.4762	0.3253	1.2374	1.5627		3,072.4903	3,072.4903	0.8396		3,093.4795

Forbes Blvd Office and R&D - San Mateo County, Summer

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0872	3.1283	1.3272	8.1100e-003	0.1725	9.8700e-003	0.1823	0.0472	9.4400e-003	0.0566		918.7378	918.7378	0.1138		921.5824
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	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481
Total	0.1367	3.1576	1.6997	9.4900e-003	0.3203	0.0108	0.3311	0.0864	0.0103	0.0967		1,056.8192	1,056.8192	0.1165		1,059.7306

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					2.1484	0.0000	2.1484	0.3253	0.0000	0.3253			0.0000			0.0000
Off-Road	2.4937	24.5653	19.5590	0.0319		1.3278	1.3278		1.2374	1.2374	0.0000	3,072.4903	3,072.4903	0.8396		3,093.4795
Total	2.4937	24.5653	19.5590	0.0319	2.1484	1.3278	3.4762	0.3253	1.2374	1.5627	0.0000	3,072.4903	3,072.4903	0.8396		3,093.4795

Forbes Blvd Office and R&D - San Mateo County, Summer

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0872	3.1283	1.3272	8.1100e-003	0.1725	9.8700e-003	0.1823	0.0472	9.4400e-003	0.0566		918.7378	918.7378	0.1138		921.5824
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	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481
Total	0.1367	3.1576	1.6997	9.4900e-003	0.3203	0.0108	0.3311	0.0864	0.0103	0.0967		1,056.8192	1,056.8192	0.1165		1,059.7306

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1495	0.0000	0.1495	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	2.0191	23.5711	15.7134	0.0311		0.9812	0.9812		0.9027	0.9027		3,011.1675	3,011.1675	0.9739		3,035.5143
Total	2.0191	23.5711	15.7134	0.0311	0.1495	0.9812	1.1307	0.0161	0.9027	0.9188		3,011.1675	3,011.1675	0.9739		3,035.5143

Forbes Blvd Office and R&D - San Mateo County, Summer

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0357	0.0212	0.2690	1.0000e-003	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		99.7255	99.7255	1.9300e-003		99.7737
Total	0.0357	0.0212	0.2690	1.0000e-003	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		99.7255	99.7255	1.9300e-003		99.7737

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					0.1495	0.0000	0.1495	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	2.0191	23.5711	15.7134	0.0311		0.9812	0.9812		0.9027	0.9027	0.0000	3,011.1675	3,011.1675	0.9739		3,035.5143
Total	2.0191	23.5711	15.7134	0.0311	0.1495	0.9812	1.1307	0.0161	0.9027	0.9188	0.0000	3,011.1675	3,011.1675	0.9739		3,035.5143

Forbes Blvd Office and R&D - San Mateo County, Summer

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0357	0.0212	0.2690	1.0000e-003	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		99.7255	99.7255	1.9300e-003		99.7737
Total	0.0357	0.0212	0.2690	1.0000e-003	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		99.7255	99.7255	1.9300e-003		99.7737

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.4732	26.7702	17.2881	0.0322		1.2531	1.2531		1.1529	1.1529		3,121.6725	3,121.6725	1.0096		3,146.9128
Total	2.4732	26.7702	17.2881	0.0322	6.1790	1.2531	7.4322	3.3272	1.1529	4.4800		3,121.6725	3,121.6725	1.0096		3,146.9128

Forbes Blvd Office and R&D - San Mateo County, Summer

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481
Total	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481

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					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.4732	26.7702	17.2881	0.0322		1.2531	1.2531		1.1529	1.1529	0.0000	3,121.6725	3,121.6725	1.0096		3,146.9128
Total	2.4732	26.7702	17.2881	0.0322	6.1790	1.2531	7.4322	3.3272	1.1529	4.4800	0.0000	3,121.6725	3,121.6725	1.0096		3,146.9128

Forbes Blvd Office and R&D - San Mateo County, Summer

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481
Total	0.0495	0.0293	0.3725	1.3800e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		138.0814	138.0814	2.6700e-003		138.1481

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.3427	25.0587	17.1220	0.0322		1.1507	1.1507		1.0587	1.0587		3,121.0434	3,121.0434	1.0094		3,146.2786
Total	2.3427	25.0587	17.1220	0.0322	6.1790	1.1507	7.3298	3.3272	1.0587	4.3859		3,121.0434	3,121.0434	1.0094		3,146.2786

Forbes Blvd Office and R&D - San Mateo County, Summer

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0462	0.0263	0.3449	1.3300e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		133.1587	133.1587	2.4000e-003		133.2187
Total	0.0462	0.0263	0.3449	1.3300e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		133.1587	133.1587	2.4000e-003		133.2187

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					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.3427	25.0587	17.1220	0.0322		1.1507	1.1507		1.0587	1.0587	0.0000	3,121.0434	3,121.0434	1.0094		3,146.2786
Total	2.3427	25.0587	17.1220	0.0322	6.1790	1.1507	7.3298	3.3272	1.0587	4.3859	0.0000	3,121.0434	3,121.0434	1.0094		3,146.2786

Forbes Blvd Office and R&D - San Mateo County, Summer

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0462	0.0263	0.3449	1.3300e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		133.1587	133.1587	2.4000e-003		133.2187
Total	0.0462	0.0263	0.3449	1.3300e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		133.1587	133.1587	2.4000e-003		133.2187

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956		4,466.3727	4,466.3727	0.7474		4,485,0588
Total	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956		4,466.3727	4,466.3727	0.7474		4,485,0588

Forbes Blvd Office and R&D - San Mateo County, Summer

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1092	3.5945	1.5016	9.2300e-003	0.2362	8.1800e-003	0.2444	0.0680	7.8200e-003	0.0758		1,017.1030	1,017.1030	0.0864		1,019.2636
Worker	0.1974	0.1126	1.4755	5.7100e-003	0.6325	3.6900e-003	0.6362	0.1678	3.4000e-003	0.1712		569.6232	569.6232	0.0103		569.8800
Total	0.3066	3.7071	2.9771	0.0149	0.8688	0.0119	0.8807	0.2358	0.0112	0.2470		1,586.7263	1,586.7263	0.0967		1,589.1436

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	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956	0.0000	4,466.3727	4,466.3727	0.7474		4,485.0588
Total	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956	0.0000	4,466.3727	4,466.3727	0.7474		4,485.0588

Forbes Blvd Office and R&D - San Mateo County, Summer

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1092	3.5945	1.5016	9.2300e-003	0.2362	8.1800e-003	0.2444	0.0680	7.8200e-003	0.0758		1,017.1030	1,017.1030	0.0864		1,019.2636
Worker	0.1974	0.1126	1.4755	5.7100e-003	0.6325	3.6900e-003	0.6362	0.1678	3.4000e-003	0.1712		569.6232	569.6232	0.0103		569.8800
Total	0.3066	3.7071	2.9771	0.0149	0.8688	0.0119	0.8807	0.2358	0.0112	0.2470		1,586.7263	1,586.7263	0.0967		1,589.1436

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952		4,466.8100	4,466.8100	0.7283		4,485.0172
Total	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952		4,466.8100	4,466.8100	0.7283		4,485.0172

Forbes Blvd Office and R&D - San Mateo County, Summer

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1026	3.3821	1.5020	9.0900e-003	0.2363	7.2100e-003	0.2435	0.0680	6.8900e-003	0.0749		1,004.0034	1,004.0034	0.0859		1,006.1513
Worker	0.1860	0.1016	1.3765	5.5000e-003	0.6325	3.6200e-003	0.6362	0.1678	3.3300e-003	0.1711		548.7407	548.7407	9.2800e-003		548.9727
Total	0.2886	3.4838	2.8785	0.0146	0.8688	0.0108	0.8796	0.2358	0.0102	0.2460		1,552.7441	1,552.7441	0.0952		1,555.1240

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	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952	0.0000	4,466.8100	4,466.8100	0.7283		4,485.0172
Total	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952	0.0000	4,466.8100	4,466.8100	0.7283		4,485.0172

Forbes Blvd Office and R&D - San Mateo County, Summer

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1026	3.3821	1.5020	9.0900e-003	0.2363	7.2100e-003	0.2435	0.0680	6.8900e-003	0.0749		1,004.0034	1,004.0034	0.0859		1,006.1513
Worker	0.1860	0.1016	1.3765	5.5000e-003	0.6325	3.6200e-003	0.6362	0.1678	3.3300e-003	0.1711		548.7407	548.7407	9.2800e-003		548.9727
Total	0.2886	3.4838	2.8785	0.0146	0.8688	0.0108	0.8796	0.2358	0.0102	0.2460		1,552.7441	1,552.7441	0.0952		1,555.1240

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414		1,756.8244	1,756.8244	0.5571		1,770.7518
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414		1,756.8244	1,756.8244	0.5571		1,770.7518

Forbes Blvd Office and R&D - San Mateo County, Summer

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427
Total	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427

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	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414	0.0000	1,756.8244	1,756.8244	0.5571		1,770.7518
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414	0.0000	1,756.8244	1,756.8244	0.5571		1,770.7518

Forbes Blvd Office and R&D - San Mateo County, Summer

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427
Total	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2897	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299		392.4712	392.4712	0.0542		393.8270
Total	15.9423	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299		392.4712	392.4712	0.0542		393.8270

Forbes Blvd Office and R&D - San Mateo County, Summer

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427
Total	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427

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	15.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2897	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299	0.0000	392.4712	392.4712	0.0542		393.8270
Total	15.9423	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299	0.0000	392.4712	392.4712	0.0542		393.8270

Forbes Blvd Office and R&D - San Mateo County, Summer

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427
Total	0.0362	0.0198	0.2682	1.0700e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		106.8975	106.8975	1.8100e-003		106.9427

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Forbes Blvd Office and R&D - San Mateo County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	0.9690	2.3648	9.9807	0.0411	4.6897	0.0252	4.7150	1.2560	0.0235	1.2795		4,167.261 4	4,167.261 4	0.1407		4,170.778 1
Unmitigated	0.9690	2.3648	9.9807	0.0411	4.6897	0.0252	4.7150	1.2560	0.0235	1.2795		4,167.261 4	4,167.261 4	0.1407		4,170.778 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	0.00	0.00	0.00		
Research & Development	880.56	0.00	0.00	1,576,360	1,576,360
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	880.56	0.00	0.00	1,576,360	1,576,360

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Forbes Blvd Office and R&D - San Mateo County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Office Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Research & Development	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Unenclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

5.0 Energy Detail

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	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
NaturalGas Unmitigated	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943

Forbes Blvd Office and R&D - San Mateo County, Summer

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					
Research & Development	8729.43	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943

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					
Research & Development	6.8407	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702

6.0 Area Detail

6.1 Mitigation Measures Area

Forbes Blvd Office and R&D - San Mateo County, Summer

	ROG	NOx	CO	SO2	Fugitive 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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Unmitigated	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

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	0.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Total	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

Forbes Blvd Office and R&D - San Mateo County, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Total	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

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
----------------	--------	-----------	-----------	-------------	-------------	-----------

Forbes Blvd Office and R&D - San Mateo County, Summer

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

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

11.0 Vegetation

Forbes Blvd Office and R&D - San Mateo County, Winter

Forbes Blvd Office and R&D
San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	128.74	1000sqft	1.48	128,737.00	0
Unenclosed Parking with Elevator	84.28	1000sqft	1.48	84,280.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	CH4 Intensity (lb/MWhr)	0.014	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Forbes Blvd Office and R&D - San Mateo County, Winter

Project Characteristics - Per Peninsula Clean Energy Factors

Land Use - Lot size is 2.96

Construction Phase - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Demolition -

Grading - Project site size

Vehicle Trips - Per project traffic analysis

Energy Use -

Construction Off-road Equipment Mitigation -

Energy Mitigation - Per current requirements

Water Mitigation - per 2016 standards

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	64,370.00	64,354.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	193,109.00	193,062.00
tblAreaCoating	Area_Nonresidential_Exterior	64370	64354
tblAreaCoating	Area_Nonresidential_Interior	193109	193062
tblConstructionPhase	NumDays	10.00	88.00
tblConstructionPhase	NumDays	220.00	282.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	6.00	20.00

Forbes Blvd Office and R&D - San Mateo County, Winter

tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	3.00	21.00
tblGrading	AcresOfGrading	10.00	2.96
tblGrading	AcresOfGrading	31.50	2.96
tblLandUse	LotAcreage	2.96	1.48
tblLandUse	LotAcreage	1.93	1.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	1.90	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	1.11	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	8.11	6.84
tblWater	IndoorWaterUseRate	31,650,339.38	31,635,588.56

2.0 Emissions Summary

Forbes Blvd Office and R&D - San Mateo County, Winter

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					
2020	2.6377	27.8274	21.2749	0.0412	6.3269	1.3388	7.5809	3.3664	1.2479	4.5201	0.0000	4,111.0410	4,111.0410	1.0122	0.0000	4,134.9605
2021	4.4640	34.2627	31.0051	0.0634	6.3269	1.5519	7.4785	3.3664	1.5072	4.4259	0.0000	6,000.3818	6,000.3818	1.0117	0.0000	6,021.5189
2022	15.9829	31.4408	30.5268	0.0631	0.8688	1.3445	2.2133	0.2358	1.3058	1.5416	0.0000	5,968.4443	5,968.4443	0.8247	0.0000	5,989.0611
Maximum	15.9829	34.2627	31.0051	0.0634	6.3269	1.5519	7.5809	3.3664	1.5072	4.5201	0.0000	6,000.3818	6,000.3818	1.0122	0.0000	6,021.5189

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					
2020	2.6377	27.8274	21.2749	0.0412	6.3269	1.3388	7.5809	3.3664	1.2479	4.5201	0.0000	4,111.0410	4,111.0410	1.0122	0.0000	4,134.9605
2021	4.4640	34.2627	31.0051	0.0634	6.3269	1.5519	7.4785	3.3664	1.5072	4.4259	0.0000	6,000.3818	6,000.3818	1.0117	0.0000	6,021.5189
2022	15.9829	31.4408	30.5268	0.0631	0.8688	1.3445	2.2133	0.2358	1.3058	1.5416	0.0000	5,968.4443	5,968.4443	0.8247	0.0000	5,989.0611
Maximum	15.9829	34.2627	31.0051	0.0634	6.3269	1.5519	7.5809	3.3664	1.5072	4.5201	0.0000	6,000.3818	6,000.3818	1.0122	0.0000	6,021.5189

Forbes Blvd Office and R&D - San Mateo County, Winter

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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Energy	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943
Mobile	0.8844	2.5342	10.2348	0.0392	4.6897	0.0253	4.7150	1.2560	0.0235	1.2795		3,972.8004	3,972.8004	0.1438		3,976.3950
Total	4.1427	3.3902	10.9753	0.0443	4.6897	0.0904	4.7801	1.2560	0.0886	1.3447		4,999.8384	4,999.8384	0.1636	0.0188	5,009.5389

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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Energy	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
Mobile	0.8844	2.5342	10.2348	0.0392	4.6897	0.0253	4.7150	1.2560	0.0235	1.2795		3,972.8004	3,972.8004	0.1438		3,976.3950
Total	4.1223	3.2050	10.8198	0.0432	4.6897	0.0763	4.7661	1.2560	0.0745	1.3306		4,777.6348	4,777.6348	0.1593	0.0148	4,786.0149

Forbes Blvd Office and R&D - San Mateo County, Winter

	ROG	NOx	CO	SO2	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	0.49	5.46	1.42	2.51	0.00	15.57	0.29	0.00	15.88	1.05	0.00	4.44	4.44	2.60	21.67	4.46

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/2/2020	5	45	
2	Site Preparation	Site Preparation	11/20/2020	12/18/2020	5	21	
3	Grading	Grading	12/19/2020	1/15/2021	5	20	
4	Building Construction	Building Construction	2/1/2021	3/1/2022	5	282	
5	Paving	Paving	3/2/2022	5/2/2022	5	44	
6	Architectural Coating	Architectural Coating	5/3/2022	9/1/2022	5	88	

Acres of Grading (Site Preparation Phase): 2.96

Acres of Grading (Grading Phase): 2.96

Acres of Paving: 1.48

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 193,062; Non-Residential Outdoor: 64,354; Striped Parking Area: 5,057 (Architectural Coating – sqft)

OffRoad Equipment

Forbes Blvd Office and R&D - San Mateo County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Excavators	3	6.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Air Compressors	4	6.00	78	0.48
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	6	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Forklifts	1	6.00	89	0.20

Trips and VMT

Forbes Blvd Office and R&D - San Mateo County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	447.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	77.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1484	0.0000	2.1484	0.3253	0.0000	0.3253			0.0000			0.0000
Off-Road	2.4937	24.5653	19.5590	0.0319		1.3278	1.3278		1.2374	1.2374		3,072.4903	3,072.4903	0.8396		3,093.4795
Total	2.4937	24.5653	19.5590	0.0319	2.1484	1.3278	3.4762	0.3253	1.2374	1.5627		3,072.4903	3,072.4903	0.8396		3,093.4795

Forbes Blvd Office and R&D - San Mateo County, Winter

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0890	3.2260	1.3553	8.0300e-003	0.1725	0.0101	0.1826	0.0472	9.6800e-003	0.0569		908.9756	908.9756	0.1147		911.8422
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	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388
Total	0.1441	3.2622	1.7159	9.3300e-003	0.3203	0.0110	0.3314	0.0864	0.0105	0.0969		1,038.5507	1,038.5507	0.1172		1,041.4809

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					2.1484	0.0000	2.1484	0.3253	0.0000	0.3253			0.0000			0.0000
Off-Road	2.4937	24.5653	19.5590	0.0319		1.3278	1.3278		1.2374	1.2374	0.0000	3,072.4903	3,072.4903	0.8396		3,093.4795
Total	2.4937	24.5653	19.5590	0.0319	2.1484	1.3278	3.4762	0.3253	1.2374	1.5627	0.0000	3,072.4903	3,072.4903	0.8396		3,093.4795

Forbes Blvd Office and R&D - San Mateo County, Winter

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0890	3.2260	1.3553	8.0300e-003	0.1725	0.0101	0.1826	0.0472	9.6800e-003	0.0569		908.9756	908.9756	0.1147		911.8422
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	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388
Total	0.1441	3.2622	1.7159	9.3300e-003	0.3203	0.0110	0.3314	0.0864	0.0105	0.0969		1,038.5507	1,038.5507	0.1172		1,041.4809

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1495	0.0000	0.1495	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	2.0191	23.5711	15.7134	0.0311		0.9812	0.9812		0.9027	0.9027		3,011.1675	3,011.1675	0.9739		3,035.5143
Total	2.0191	23.5711	15.7134	0.0311	0.1495	0.9812	1.1307	0.0161	0.9027	0.9188		3,011.1675	3,011.1675	0.9739		3,035.5143

Forbes Blvd Office and R&D - San Mateo County, Winter

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0398	0.0261	0.2605	9.4000e-004	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		93.5820	93.5820	1.8400e-003		93.6280
Total	0.0398	0.0261	0.2605	9.4000e-004	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		93.5820	93.5820	1.8400e-003		93.6280

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					0.1495	0.0000	0.1495	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	2.0191	23.5711	15.7134	0.0311		0.9812	0.9812		0.9027	0.9027	0.0000	3,011.1675	3,011.1675	0.9739		3,035.5143
Total	2.0191	23.5711	15.7134	0.0311	0.1495	0.9812	1.1307	0.0161	0.9027	0.9188	0.0000	3,011.1675	3,011.1675	0.9739		3,035.5143

Forbes Blvd Office and R&D - San Mateo County, Winter

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0398	0.0261	0.2605	9.4000e-004	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		93.5820	93.5820	1.8400e-003		93.6280
Total	0.0398	0.0261	0.2605	9.4000e-004	0.1068	6.4000e-004	0.1074	0.0283	5.9000e-004	0.0289		93.5820	93.5820	1.8400e-003		93.6280

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.4732	26.7702	17.2881	0.0322		1.2531	1.2531		1.1529	1.1529		3,121.6725	3,121.6725	1.0096		3,146.9128
Total	2.4732	26.7702	17.2881	0.0322	6.1790	1.2531	7.4322	3.3272	1.1529	4.4800		3,121.6725	3,121.6725	1.0096		3,146.9128

Forbes Blvd Office and R&D - San Mateo County, Winter

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388
Total	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388

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					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.4732	26.7702	17.2881	0.0322		1.2531	1.2531		1.1529	1.1529	0.0000	3,121.6725	3,121.6725	1.0096		3,146.9128
Total	2.4732	26.7702	17.2881	0.0322	6.1790	1.2531	7.4322	3.3272	1.1529	4.4800	0.0000	3,121.6725	3,121.6725	1.0096		3,146.9128

Forbes Blvd Office and R&D - San Mateo County, Winter

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388
Total	0.0550	0.0362	0.3607	1.3000e-003	0.1479	8.9000e-004	0.1488	0.0392	8.2000e-004	0.0400		129.5751	129.5751	2.5500e-003		129.6388

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.3427	25.0587	17.1220	0.0322		1.1507	1.1507		1.0587	1.0587		3,121.0434	3,121.0434	1.0094		3,146.2786
Total	2.3427	25.0587	17.1220	0.0322	6.1790	1.1507	7.3298	3.3272	1.0587	4.3859		3,121.0434	3,121.0434	1.0094		3,146.2786

Forbes Blvd Office and R&D - San Mateo County, Winter

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0515	0.0325	0.3327	1.2500e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		124.9665	124.9665	2.2800e-003		125.0236
Total	0.0515	0.0325	0.3327	1.2500e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		124.9665	124.9665	2.2800e-003		125.0236

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					6.1790	0.0000	6.1790	3.3272	0.0000	3.3272			0.0000			0.0000
Off-Road	2.3427	25.0587	17.1220	0.0322		1.1507	1.1507		1.0587	1.0587	0.0000	3,121.0434	3,121.0434	1.0094		3,146.2786
Total	2.3427	25.0587	17.1220	0.0322	6.1790	1.1507	7.3298	3.3272	1.0587	4.3859	0.0000	3,121.0434	3,121.0434	1.0094		3,146.2786

Forbes Blvd Office and R&D - San Mateo County, Winter

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0515	0.0325	0.3327	1.2500e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		124.9665	124.9665	2.2800e-003		125.0236
Total	0.0515	0.0325	0.3327	1.2500e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		124.9665	124.9665	2.2800e-003		125.0236

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956		4,466.3727	4,466.3727	0.7474		4,485.0588
Total	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956		4,466.3727	4,466.3727	0.7474		4,485.0588

Forbes Blvd Office and R&D - San Mateo County, Winter

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1152	3.6446	1.6314	9.0800e-003	0.2362	8.5900e-003	0.2448	0.0680	8.2100e-003	0.0762		999.4301	999.4301	0.0883		1,001.6368
Worker	0.2205	0.1389	1.4231	5.3600e-003	0.6325	3.6900e-003	0.6362	0.1678	3.4000e-003	0.1712		534.5790	534.5790	9.7700e-003		534.8233
Total	0.3356	3.7836	3.0544	0.0144	0.8688	0.0123	0.8811	0.2358	0.0116	0.2474		1,534.0091	1,534.0091	0.0980		1,536.4601

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	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956	0.0000	4,466.3727	4,466.3727	0.7474		4,485.0588
Total	4.1284	30.4792	27.9506	0.0490		1.5396	1.5396		1.4956	1.4956	0.0000	4,466.3727	4,466.3727	0.7474		4,485.0588

Forbes Blvd Office and R&D - San Mateo County, Winter

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1152	3.6446	1.6314	9.0800e-003	0.2362	8.5900e-003	0.2448	0.0680	8.2100e-003	0.0762		999.4301	999.4301	0.0883		1,001.6368
Worker	0.2205	0.1389	1.4231	5.3600e-003	0.6325	3.6900e-003	0.6362	0.1678	3.4000e-003	0.1712		534.5790	534.5790	9.7700e-003		534.8233
Total	0.3356	3.7836	3.0544	0.0144	0.8688	0.0123	0.8811	0.2358	0.0116	0.2474		1,534.0091	1,534.0091	0.0980		1,536.4601

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952		4,466.8100	4,466.8100	0.7283		4,485.0172
Total	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952		4,466.8100	4,466.8100	0.7283		4,485.0172

Forbes Blvd Office and R&D - San Mateo County, Winter

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1082	3.4276	1.6266	8.9400e-003	0.2363	7.5800e-003	0.2438	0.0680	7.2400e-003	0.0752		986.6064	986.6064	0.0876		988.7959
Worker	0.2087	0.1254	1.3223	5.1600e-003	0.6325	3.6200e-003	0.6362	0.1678	3.3300e-003	0.1711		515.0280	515.0280	8.8000e-003		515.2480
Total	0.3168	3.5530	2.9489	0.0141	0.8688	0.0112	0.8800	0.2358	0.0106	0.2463		1,501.6343	1,501.6343	0.0964		1,504.0439

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	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952	0.0000	4,466.8100	4,466.8100	0.7283		4,485.0172
Total	3.7774	27.8879	27.5779	0.0490		1.3333	1.3333		1.2952	1.2952	0.0000	4,466.8100	4,466.8100	0.7283		4,485.0172

Forbes Blvd Office and R&D - San Mateo County, Winter

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1082	3.4276	1.6266	8.9400e-003	0.2363	7.5800e-003	0.2438	0.0680	7.2400e-003	0.0752		986.6064	986.6064	0.0876		988.7959
Worker	0.2087	0.1254	1.3223	5.1600e-003	0.6325	3.6200e-003	0.6362	0.1678	3.3300e-003	0.1711		515.0280	515.0280	8.8000e-003		515.2480
Total	0.3168	3.5530	2.9489	0.0141	0.8688	0.0112	0.8800	0.2358	0.0106	0.2463		1,501.6343	1,501.6343	0.0964		1,504.0439

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414		1,756.8244	1,756.8244	0.5571		1,770.7518
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414		1,756.8244	1,756.8244	0.5571		1,770.7518

Forbes Blvd Office and R&D - San Mateo County, Winter

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730
Total	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730

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	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414	0.0000	1,756.8244	1,756.8244	0.5571		1,770.7518
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9396	9.2819	12.0746	0.0183		0.4785	0.4785		0.4414	0.4414	0.0000	1,756.8244	1,756.8244	0.5571		1,770.7518

Forbes Blvd Office and R&D - San Mateo County, Winter

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730
Total	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2897	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299		392.4712	392.4712	0.0542		393.8270
Total	15.9423	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299		392.4712	392.4712	0.0542		393.8270

Forbes Blvd Office and R&D - San Mateo County, Winter

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730
Total	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730

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	15.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2897	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299	0.0000	392.4712	392.4712	0.0542		393.8270
Total	15.9423	2.1997	2.6789	4.1200e-003		0.1341	0.1341		0.1299	0.1299	0.0000	392.4712	392.4712	0.0542		393.8270

Forbes Blvd Office and R&D - San Mateo County, Winter

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730
Total	0.0407	0.0244	0.2576	1.0100e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		100.3301	100.3301	1.7100e-003		100.3730

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Forbes Blvd Office and R&D - San Mateo County, Winter

	ROG	NOx	CO	SO2	Fugitive 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	0.8844	2.5342	10.2348	0.0392	4.6897	0.0253	4.7150	1.2560	0.0235	1.2795		3,972.8004	3,972.8004	0.1438		3,976.3950
Unmitigated	0.8844	2.5342	10.2348	0.0392	4.6897	0.0253	4.7150	1.2560	0.0235	1.2795		3,972.8004	3,972.8004	0.1438		3,976.3950

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	0.00	0.00	0.00		
Research & Development	880.56	0.00	0.00	1,576,360	1,576,360
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	880.56	0.00	0.00	1,576,360	1,576,360

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Forbes Blvd Office and R&D - San Mateo County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Office Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Research & Development	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Unenclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

5.0 Energy Detail

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	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
NaturalGas Unmitigated	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943

Forbes Blvd Office and R&D - San Mateo County, Winter

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					
Research & Development	8729.43	0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0941	0.8558	0.7189	5.1300e-003		0.0650	0.0650		0.0650	0.0650		1,026.9914	1,026.9914	0.0197	0.0188	1,033.0943

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					
Research & Development	6.8407	0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0738	0.6707	0.5634	4.0200e-003		0.0510	0.0510		0.0510	0.0510		804.7878	804.7878	0.0154	0.0148	809.5702

6.0 Area Detail

6.1 Mitigation Measures Area

Forbes Blvd Office and R&D - San Mateo County, Winter

	ROG	NOx	CO	SO2	Fugitive 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	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Unmitigated	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

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	0.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Total	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

Forbes Blvd Office and R&D - San Mateo County, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3774					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7848					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496
Total	3.1642	1.9000e-004	0.0216	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0466	0.0466	1.2000e-004		0.0496

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
----------------	--------	-----------	-----------	-------------	-------------	-----------

Forbes Blvd Office and R&D - San Mateo County, Winter

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

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

11.0 Vegetation

Forbes Blvd Office and R&D - San Mateo County, Annual

Forbes Blvd Office and R&D
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	128.74	1000sqft	1.48	128,737.00	0
Unenclosed Parking with Elevator	84.28	1000sqft	1.48	84,280.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	CH4 Intensity (lb/MWhr)	0.014	N2O Intensity (lb/MWhr)	0.003

1.3 User Entered Comments & Non-Default Data

Forbes Blvd Office and R&D - San Mateo County, Annual

Project Characteristics - Per Peninsula Clean Energy Factors

Land Use - Lot size is 2.96

Construction Phase - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Off-road Equipment - Per construction plans from applicant

Demolition -

Grading - Project site size

Vehicle Trips - Per project traffic analysis

Energy Use -

Construction Off-road Equipment Mitigation -

Energy Mitigation - Per current requirements

Water Mitigation - per 2016 standards

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	64,370.00	64,354.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	193,109.00	193,062.00
tblAreaCoating	Area_Nonresidential_Exterior	64370	64354
tblAreaCoating	Area_Nonresidential_Interior	193109	193062
tblConstructionPhase	NumDays	10.00	88.00
tblConstructionPhase	NumDays	220.00	282.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	6.00	20.00

Forbes Blvd Office and R&D - San Mateo County, Annual

tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	3.00	21.00
tblGrading	AcresOfGrading	10.00	2.96
tblGrading	AcresOfGrading	31.50	2.96
tblLandUse	LotAcreage	2.96	1.48
tblLandUse	LotAcreage	1.93	1.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	1.90	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	1.11	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	8.11	6.84
tblWater	IndoorWaterUseRate	31,650,339.38	31,635,588.56

2.0 Emissions Summary

Forbes Blvd Office and R&D - San Mateo County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0921	0.9940	0.7251	1.4100e-003	0.0872	0.0461	0.1333	0.0249	0.0428	0.0676	0.0000	126.8910	126.8910	0.0329	0.0000	127.7146
2021	0.5455	4.2482	3.8038	7.8100e-003	0.1356	0.1925	0.3281	0.0459	0.1867	0.2325	0.0000	670.7490	670.7490	0.0970	0.0000	673.1734
2022	0.8099	0.9625	1.0390	1.9800e-003	0.0253	0.0447	0.0700	6.8500e-003	0.0429	0.0497	0.0000	170.6921	170.6921	0.0291	0.0000	171.4191
Maximum	0.8099	4.2482	3.8038	7.8100e-003	0.1356	0.1925	0.3281	0.0459	0.1867	0.2325	0.0000	670.7490	670.7490	0.0970	0.0000	673.1734

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0921	0.9940	0.7251	1.4100e-003	0.0872	0.0461	0.1333	0.0249	0.0428	0.0676	0.0000	126.8908	126.8908	0.0329	0.0000	127.7145
2021	0.5455	4.2482	3.8038	7.8100e-003	0.1356	0.1925	0.3281	0.0459	0.1867	0.2325	0.0000	670.7484	670.7484	0.0970	0.0000	673.1728
2022	0.8099	0.9625	1.0390	1.9800e-003	0.0253	0.0447	0.0700	6.8500e-003	0.0429	0.0497	0.0000	170.6919	170.6919	0.0291	0.0000	171.4189
Maximum	0.8099	4.2482	3.8038	7.8100e-003	0.1356	0.1925	0.3281	0.0459	0.1867	0.2325	0.0000	670.7484	670.7484	0.0970	0.0000	673.1728

Forbes Blvd Office and R&D - San Mateo County, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2020	11-30-2020	0.7851	0.7851
2	12-1-2020	2-28-2021	0.8356	0.8356
3	3-1-2021	5-31-2021	1.2702	1.2702
4	6-1-2021	8-31-2021	1.2690	1.2690
5	9-1-2021	11-30-2021	1.2575	1.2575
6	12-1-2021	2-28-2022	1.1775	1.1775
7	3-1-2022	5-31-2022	0.4288	0.4288
8	6-1-2022	8-31-2022	0.5979	0.5979
9	9-1-2022	9-30-2022	0.0065	0.0065
		Highest	1.2702	1.2702

Forbes Blvd Office and R&D - San Mateo County, Annual

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003
Energy	0.0172	0.1562	0.1312	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	236.9424	236.9424	0.0105	4.6600e-003	238.5942
Mobile	0.1143	0.3210	1.2758	5.1100e-003	0.5847	3.2800e-003	0.5880	0.1572	3.0500e-003	0.1602	0.0000	469.6583	469.6583	0.0167	0.0000	470.0747
Waste						0.0000	0.0000		0.0000	0.0000	13.1437	0.0000	13.1437	0.7768	0.0000	32.5629
Water						0.0000	0.0000		0.0000	0.0000	13.6661	15.1647	28.8308	1.4053	0.0335	73.9439
Total	0.7088	0.4772	1.4089	6.0500e-003	0.5847	0.0152	0.5998	0.1572	0.0149	0.1721	26.8098	721.7692	748.5790	2.2092	0.0382	815.1797

Forbes Blvd Office and R&D - San Mateo County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003
Energy	0.0135	0.1224	0.1028	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	197.4033	197.4033	9.4800e-003	3.9300e-003	198.8102
Mobile	0.1143	0.3210	1.2758	5.1100e-003	0.5847	3.2800e-003	0.5880	0.1572	3.0500e-003	0.1602	0.0000	469.6583	469.6583	0.0167	0.0000	470.0747
Waste						0.0000	0.0000		0.0000	0.0000	9.8578	0.0000	9.8578	0.5826	0.0000	24.4222
Water						0.0000	0.0000		0.0000	0.0000	10.9329	12.4207	23.3536	1.1243	0.0268	59.4468
Total	0.7050	0.4434	1.3805	5.8400e-003	0.5847	0.0126	0.5973	0.1572	0.0124	0.1695	20.7907	679.4861	700.2768	1.7330	0.0307	752.7579

	ROG	NOx	CO	SO2	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	0.52	7.08	2.02	3.47	0.00	16.95	0.43	0.00	17.21	1.49	22.45	5.86	6.45	21.56	19.45	7.66

3.0 Construction Detail

Construction Phase

Forbes Blvd Office and R&D - San Mateo County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/2/2020	5	45	
2	Site Preparation	Site Preparation	11/20/2020	12/18/2020	5	21	
3	Grading	Grading	12/19/2020	1/15/2021	5	20	
4	Building Construction	Building Construction	2/1/2021	3/1/2022	5	282	
5	Paving	Paving	3/2/2022	5/2/2022	5	44	
6	Architectural Coating	Architectural Coating	5/3/2022	9/1/2022	5	88	

Acres of Grading (Site Preparation Phase): 2.96

Acres of Grading (Grading Phase): 2.96

Acres of Paving: 1.48

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 193,062; Non-Residential Outdoor: 64,354; Striped Parking Area: 5,057 (Architectural Coating – sqft)

OffRoad Equipment

Forbes Blvd Office and R&D - San Mateo County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Excavators	3	6.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Air Compressors	4	6.00	78	0.48
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	6	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Forklifts	1	6.00	89	0.20

Trips and VMT

Forbes Blvd Office and R&D - San Mateo County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	447.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	77.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0483	0.0000	0.0483	7.3200e-003	0.0000	7.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0561	0.5527	0.4401	7.2000e-004		0.0299	0.0299		0.0278	0.0278	0.0000	62.7146	62.7146	0.0171	0.0000	63.1430
Total	0.0561	0.5527	0.4401	7.2000e-004	0.0483	0.0299	0.0782	7.3200e-003	0.0278	0.0352	0.0000	62.7146	62.7146	0.0171	0.0000	63.1430

Forbes Blvd Office and R&D - San Mateo County, Annual

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9800e-003	0.0721	0.0301	1.8000e-004	3.7400e-003	2.2000e-004	3.9600e-003	1.0300e-003	2.1000e-004	1.2400e-003	0.0000	18.6693	18.6693	2.3300e-003	0.0000	18.7275
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	1.1000e-003	7.5000e-004	7.8800e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.6549	2.6549	5.0000e-005	0.0000	2.6562
Total	3.0800e-003	0.0729	0.0380	2.1000e-004	6.9300e-003	2.4000e-004	7.1700e-003	1.8800e-003	2.3000e-004	2.1100e-003	0.0000	21.3242	21.3242	2.3800e-003	0.0000	21.3837

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					0.0483	0.0000	0.0483	7.3200e-003	0.0000	7.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0561	0.5527	0.4401	7.2000e-004		0.0299	0.0299		0.0278	0.0278	0.0000	62.7145	62.7145	0.0171	0.0000	63.1430
Total	0.0561	0.5527	0.4401	7.2000e-004	0.0483	0.0299	0.0782	7.3200e-003	0.0278	0.0352	0.0000	62.7145	62.7145	0.0171	0.0000	63.1430

Forbes Blvd Office and R&D - San Mateo County, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9800e-003	0.0721	0.0301	1.8000e-004	3.7400e-003	2.2000e-004	3.9600e-003	1.0300e-003	2.1000e-004	1.2400e-003	0.0000	18.6693	18.6693	2.3300e-003	0.0000	18.7275
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	1.1000e-003	7.5000e-004	7.8800e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.6549	2.6549	5.0000e-005	0.0000	2.6562
Total	3.0800e-003	0.0729	0.0380	2.1000e-004	6.9300e-003	2.4000e-004	7.1700e-003	1.8800e-003	2.3000e-004	2.1100e-003	0.0000	21.3242	21.3242	2.3800e-003	0.0000	21.3837

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5700e-003	0.0000	1.5700e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.2475	0.1650	3.3000e-004		0.0103	0.0103		9.4800e-003	9.4800e-003	0.0000	28.6827	28.6827	9.2800e-003	0.0000	28.9146
Total	0.0212	0.2475	0.1650	3.3000e-004	1.5700e-003	0.0103	0.0119	1.7000e-004	9.4800e-003	9.6500e-003	0.0000	28.6827	28.6827	9.2800e-003	0.0000	28.9146

Forbes Blvd Office and R&D - San Mateo County, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.5000e-004	2.6600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8948	0.8948	2.0000e-005	0.0000	0.8952
Total	3.7000e-004	2.5000e-004	2.6600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8948	0.8948	2.0000e-005	0.0000	0.8952

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5700e-003	0.0000	1.5700e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.2475	0.1650	3.3000e-004		0.0103	0.0103		9.4800e-003	9.4800e-003	0.0000	28.6827	28.6827	9.2800e-003	0.0000	28.9146
Total	0.0212	0.2475	0.1650	3.3000e-004	1.5700e-003	0.0103	0.0119	1.7000e-004	9.4800e-003	9.6500e-003	0.0000	28.6827	28.6827	9.2800e-003	0.0000	28.9146

Forbes Blvd Office and R&D - San Mateo County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.5000e-004	2.6600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8948	0.8948	2.0000e-005	0.0000	0.8952
Total	3.7000e-004	2.5000e-004	2.6600e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8948	0.8948	2.0000e-005	0.0000	0.8952

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0287	0.0000	0.0287	0.0151	0.0000	0.0151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1205	0.0778	1.4000e-004		5.6400e-003	5.6400e-003		5.1900e-003	5.1900e-003	0.0000	12.7437	12.7437	4.1200e-003	0.0000	12.8467
Total	0.0111	0.1205	0.0778	1.4000e-004	0.0287	5.6400e-003	0.0343	0.0151	5.1900e-003	0.0203	0.0000	12.7437	12.7437	4.1200e-003	0.0000	12.8467

Forbes Blvd Office and R&D - San Mateo County, Annual

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.5000e-004	1.5800e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5310	0.5310	1.0000e-005	0.0000	0.5312
Total	2.2000e-004	1.5000e-004	1.5800e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5310	0.5310	1.0000e-005	0.0000	0.5312

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					0.0287	0.0000	0.0287	0.0151	0.0000	0.0151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1205	0.0778	1.4000e-004		5.6400e-003	5.6400e-003		5.1900e-003	5.1900e-003	0.0000	12.7437	12.7437	4.1200e-003	0.0000	12.8467
Total	0.0111	0.1205	0.0778	1.4000e-004	0.0287	5.6400e-003	0.0343	0.0151	5.1900e-003	0.0203	0.0000	12.7437	12.7437	4.1200e-003	0.0000	12.8467

Forbes Blvd Office and R&D - San Mateo County, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.5000e-004	1.5800e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5310	0.5310	1.0000e-005	0.0000	0.5312
Total	2.2000e-004	1.5000e-004	1.5800e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5310	0.5310	1.0000e-005	0.0000	0.5312

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0347	0.0000	0.0347	0.0184	0.0000	0.0184	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0129	0.1378	0.0942	1.8000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	15.5725	15.5725	5.0400e-003	0.0000	15.6984
Total	0.0129	0.1378	0.0942	1.8000e-004	0.0347	6.3300e-003	0.0410	0.0184	5.8200e-003	0.0242	0.0000	15.5725	15.5725	5.0400e-003	0.0000	15.6984

Forbes Blvd Office and R&D - San Mateo County, Annual

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	2.5000e-004	1.6000e-004	1.7800e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6259	0.6259	1.0000e-005	0.0000	0.6262
Total	2.5000e-004	1.6000e-004	1.7800e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6259	0.6259	1.0000e-005	0.0000	0.6262

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					0.0347	0.0000	0.0347	0.0184	0.0000	0.0184	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0129	0.1378	0.0942	1.8000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	15.5725	15.5725	5.0400e-003	0.0000	15.6984
Total	0.0129	0.1378	0.0942	1.8000e-004	0.0347	6.3300e-003	0.0410	0.0184	5.8200e-003	0.0242	0.0000	15.5725	15.5725	5.0400e-003	0.0000	15.6984

Forbes Blvd Office and R&D - San Mateo County, Annual

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	2.5000e-004	1.6000e-004	1.7800e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6259	0.6259	1.0000e-005	0.0000	0.6262
Total	2.5000e-004	1.6000e-004	1.7800e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6259	0.6259	1.0000e-005	0.0000	0.6262

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4954	3.6575	3.3541	5.8800e-003		0.1848	0.1848		0.1795	0.1795	0.0000	486.2190	486.2190	0.0814	0.0000	488.2532
Total	0.4954	3.6575	3.3541	5.8800e-003		0.1848	0.1848		0.1795	0.1795	0.0000	486.2190	486.2190	0.0814	0.0000	488.2532

Forbes Blvd Office and R&D - San Mateo County, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4374	0.1877	1.1000e-003	0.0274	1.0000e-003	0.0284	7.9200e-003	9.6000e-004	8.8800e-003	0.0000	109.9154	109.9154	9.5000e-003	0.0000	110.1528
Worker	0.0236	0.0153	0.1660	6.5000e-004	0.0727	4.4000e-004	0.0732	0.0194	4.1000e-004	0.0198	0.0000	58.4163	58.4163	1.0600e-003	0.0000	58.4428
Total	0.0370	0.4527	0.3538	1.7500e-003	0.1001	1.4400e-003	0.1016	0.0273	1.3700e-003	0.0286	0.0000	168.3316	168.3316	0.0106	0.0000	168.5956

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	0.4954	3.6575	3.3541	5.8800e-003		0.1848	0.1848		0.1795	0.1795	0.0000	486.2184	486.2184	0.0814	0.0000	488.2527
Total	0.4954	3.6575	3.3541	5.8800e-003		0.1848	0.1848		0.1795	0.1795	0.0000	486.2184	486.2184	0.0814	0.0000	488.2527

Forbes Blvd Office and R&D - San Mateo County, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4374	0.1877	1.1000e-003	0.0274	1.0000e-003	0.0284	7.9200e-003	9.6000e-004	8.8800e-003	0.0000	109.9154	109.9154	9.5000e-003	0.0000	110.1528
Worker	0.0236	0.0153	0.1660	6.5000e-004	0.0727	4.4000e-004	0.0732	0.0194	4.1000e-004	0.0198	0.0000	58.4163	58.4163	1.0600e-003	0.0000	58.4428
Total	0.0370	0.4527	0.3538	1.7500e-003	0.1001	1.4400e-003	0.1016	0.0273	1.3700e-003	0.0286	0.0000	168.3316	168.3316	0.0106	0.0000	168.5956

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0793	0.5857	0.5791	1.0300e-003		0.0280	0.0280		0.0272	0.0272	0.0000	85.0967	85.0967	0.0139	0.0000	85.4435
Total	0.0793	0.5857	0.5791	1.0300e-003		0.0280	0.0280		0.0272	0.0272	0.0000	85.0967	85.0967	0.0139	0.0000	85.4435

Forbes Blvd Office and R&D - San Mateo County, Annual

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2100e-003	0.0720	0.0328	1.9000e-004	4.7900e-003	1.5000e-004	4.9500e-003	1.3900e-003	1.5000e-004	1.5300e-003	0.0000	18.9878	18.9878	1.6500e-003	0.0000	19.0291
Worker	3.8900e-003	2.4200e-003	0.0270	1.1000e-004	0.0127	8.0000e-005	0.0128	3.3900e-003	7.0000e-005	3.4600e-003	0.0000	9.8489	9.8489	1.7000e-004	0.0000	9.8531
Total	6.1000e-003	0.0744	0.0598	3.0000e-004	0.0175	2.3000e-004	0.0178	4.7800e-003	2.2000e-004	4.9900e-003	0.0000	28.8368	28.8368	1.8200e-003	0.0000	28.8822

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	0.0793	0.5856	0.5791	1.0300e-003		0.0280	0.0280		0.0272	0.0272	0.0000	85.0966	85.0966	0.0139	0.0000	85.4434
Total	0.0793	0.5856	0.5791	1.0300e-003		0.0280	0.0280		0.0272	0.0272	0.0000	85.0966	85.0966	0.0139	0.0000	85.4434

Forbes Blvd Office and R&D - San Mateo County, Annual

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2100e-003	0.0720	0.0328	1.9000e-004	4.7900e-003	1.5000e-004	4.9500e-003	1.3900e-003	1.5000e-004	1.5300e-003	0.0000	18.9878	18.9878	1.6500e-003	0.0000	19.0291
Worker	3.8900e-003	2.4200e-003	0.0270	1.1000e-004	0.0127	8.0000e-005	0.0128	3.3900e-003	7.0000e-005	3.4600e-003	0.0000	9.8489	9.8489	1.7000e-004	0.0000	9.8531
Total	6.1000e-003	0.0744	0.0598	3.0000e-004	0.0175	2.3000e-004	0.0178	4.7800e-003	2.2000e-004	4.9900e-003	0.0000	28.8368	28.8368	1.8200e-003	0.0000	28.8822

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0207	0.2042	0.2656	4.0000e-004		0.0105	0.0105		9.7100e-003	9.7100e-003	0.0000	35.0628	35.0628	0.0111	0.0000	35.3408
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0207	0.2042	0.2656	4.0000e-004		0.0105	0.0105		9.7100e-003	9.7100e-003	0.0000	35.0628	35.0628	0.0111	0.0000	35.3408

Forbes Blvd Office and R&D - San Mateo County, Annual

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108
Total	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108

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	0.0207	0.2042	0.2656	4.0000e-004		0.0105	0.0105		9.7100e-003	9.7100e-003	0.0000	35.0628	35.0628	0.0111	0.0000	35.3407
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0207	0.2042	0.2656	4.0000e-004		0.0105	0.0105		9.7100e-003	9.7100e-003	0.0000	35.0628	35.0628	0.0111	0.0000	35.3407

Forbes Blvd Office and R&D - San Mateo County, Annual

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108
Total	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.0968	0.1179	1.8000e-004		5.9000e-003	5.9000e-003		5.7200e-003	5.7200e-003	0.0000	15.6659	15.6659	2.1600e-003	0.0000	15.7201
Total	0.7015	0.0968	0.1179	1.8000e-004		5.9000e-003	5.9000e-003		5.7200e-003	5.7200e-003	0.0000	15.6659	15.6659	2.1600e-003	0.0000	15.7201

Forbes Blvd Office and R&D - San Mateo County, Annual

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	9.9000e-004	0.0110	4.0000e-005	5.2000e-003	3.0000e-005	5.2300e-003	1.3800e-003	3.0000e-005	1.4100e-003	0.0000	4.0200	4.0200	7.0000e-005	0.0000	4.0217
Total	1.5900e-003	9.9000e-004	0.0110	4.0000e-005	5.2000e-003	3.0000e-005	5.2300e-003	1.3800e-003	3.0000e-005	1.4100e-003	0.0000	4.0200	4.0200	7.0000e-005	0.0000	4.0217

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.0968	0.1179	1.8000e-004		5.9000e-003	5.9000e-003		5.7200e-003	5.7200e-003	0.0000	15.6659	15.6659	2.1600e-003	0.0000	15.7200
Total	0.7015	0.0968	0.1179	1.8000e-004		5.9000e-003	5.9000e-003		5.7200e-003	5.7200e-003	0.0000	15.6659	15.6659	2.1600e-003	0.0000	15.7200

Forbes Blvd Office and R&D - San Mateo County, Annual

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	9.9000e-004	0.0110	4.0000e-005	5.2000e-003	3.0000e-005	5.2300e-003	1.3800e-003	3.0000e-005	1.4100e-003	0.0000	4.0200	4.0200	7.0000e-005	0.0000	4.0217
Total	1.5900e-003	9.9000e-004	0.0110	4.0000e-005	5.2000e-003	3.0000e-005	5.2300e-003	1.3800e-003	3.0000e-005	1.4100e-003	0.0000	4.0200	4.0200	7.0000e-005	0.0000	4.0217

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Forbes Blvd Office and R&D - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1143	0.3210	1.2758	5.1100e-003	0.5847	3.2800e-003	0.5880	0.1572	3.0500e-003	0.1602	0.0000	469.6583	469.6583	0.0167	0.0000	470.0747
Unmitigated	0.1143	0.3210	1.2758	5.1100e-003	0.5847	3.2800e-003	0.5880	0.1572	3.0500e-003	0.1602	0.0000	469.6583	469.6583	0.0167	0.0000	470.0747

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	0.00	0.00	0.00		
Research & Development	880.56	0.00	0.00	1,576,360	1,576,360
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	880.56	0.00	0.00	1,576,360	1,576,360

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Forbes Blvd Office and R&D - San Mateo County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Office Park	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Research & Development	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896
Unenclosed Parking with Elevator	0.448867	0.051210	0.277116	0.145918	0.016779	0.007633	0.027321	0.006813	0.004476	0.002855	0.009510	0.000605	0.000896

5.0 Energy Detail

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	64.1617	64.1617	6.9200e-003	1.4800e-003	64.7768
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	66.9124	66.9124	7.2200e-003	1.5500e-003	67.5539
NaturalGas Mitigated	0.0135	0.1224	0.1028	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.2416	133.2416	2.5500e-003	2.4400e-003	134.0334
NaturalGas Unmitigated	0.0172	0.1562	0.1312	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	170.0299	170.0299	3.2600e-003	3.1200e-003	171.0403

Forbes Blvd Office and R&D - San Mateo County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Research & Development	3.18624e+006	0.0172	0.1562	0.1312	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	170.0299	170.0299	3.2600e-003	3.1200e-003	171.0403
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0172	0.1562	0.1312	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	170.0299	170.0299	3.2600e-003	3.1200e-003	171.0403

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					
Research & Development	2.49685e+006	0.0135	0.1224	0.1028	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.2416	133.2416	2.5500e-003	2.4400e-003	134.0334
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0135	0.1224	0.1028	7.3000e-004		9.3000e-003	9.3000e-003		9.3000e-003	9.3000e-003	0.0000	133.2416	133.2416	2.5500e-003	2.4400e-003	134.0334

Forbes Blvd Office and R&D - San Mateo County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Research & Development	973252	57.2882	6.1800e-003	1.3200e-003	57.8374
Unenclosed Parking with Elevator	163503	9.6242	1.0400e-003	2.2000e-004	9.7165
Total		66.9125	7.2200e-003	1.5400e-003	67.5539

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Research & Development	926520	54.5375	5.8800e-003	1.2600e-003	55.0603
Unenclosed Parking with Elevator	163503	9.6242	1.0400e-003	2.2000e-004	9.7165
Total		64.1617	6.9200e-003	1.4800e-003	64.7768

6.0 Area Detail

6.1 Mitigation Measures Area

Forbes Blvd Office and R&D - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003
Unmitigated	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0689					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5082					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003
Total	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003

Forbes Blvd Office and R&D - San Mateo County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0689					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5082					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003
Total	0.5773	2.0000e-005	1.9500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8100e-003	3.8100e-003	1.0000e-005	0.0000	4.0500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Forbes Blvd Office and R&D - San Mateo County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	23.3536	1.1243	0.0268	59.4468
Unmitigated	28.8308	1.4053	0.0335	73.9439

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	11.4407 / 7.01206	8.7182	0.3734	8.9200e-003	20.7100
Research & Development	31.6356 / 0	20.1126	1.0319	0.0246	53.2339
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		28.8308	1.4053	0.0335	73.9439

Forbes Blvd Office and R&D - San Mateo County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	9.15258 / 7.01206	7.2635	0.2987	7.1400e-003	16.8597
Research & Development	25.3085 / 0	16.0901	0.8256	0.0197	42.5871
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		23.3536	1.1243	0.0268	59.4468

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Forbes Blvd Office and R&D - San Mateo County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.8578	0.5826	0.0000	24.4222
Unmitigated	13.1437	0.7768	0.0000	32.5629

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	59.86	12.1510	0.7181	0.0000	30.1037
Research & Development	4.89	0.9926	0.0587	0.0000	2.4592
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		13.1437	0.7768	0.0000	32.5629

Forbes Blvd Office and R&D - San Mateo County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	44.895	9.1133	0.5386	0.0000	22.5778
Research & Development	3.6675	0.7445	0.0440	0.0000	1.8444
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		9.8578	0.5826	0.0000	24.4222

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

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

Forbes Blvd Office and R&D - San Mateo County, Annual

11.0 Vegetation

399 Forbes R&D Office

Last Updated: DATE

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors [1]:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529
--------------	--------	----------------------	--------

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per		Load Factor	Construction Phase	Fuel Used (gallons)
		Day	Horsepower			
Rubber Tired Dozer	1	8	247	0.40	Demo	1,880.09
Concrete Saws	1	8	81	0.73	Demo	1,250.90
Tractors/Loaders/Backhoes	3	8	97	0.37	Demo	2,277.77
Excavators	2	6	20	0.30	Demo	190.40
Graders	1	8	187	0.41	Site Prep	680.85
Excavators	1	6	158	0.38	Site Prep	399.88
Tractors/Loaders/Backhoes	2	7	97	0.37	Site Prep	620.06
Scrapers	1	8	367	0.47	Site Prep	1,531.76
Graders	1	8	187	0.41	Grading	648.43
Excavators	3	6	158	0.38	Grading	1,142.52
Rubber Tired Dozer	1	8	247	0.40	Grading	835.59
Tractors/Loaders/Backhoes	2	7	97	0.37	Grading	590.53
Cranes	2	8	231	0.29	Building	15,977.10
Forklifts	1	7	89	0.20	Building	2,064.81
Generator Sets	1	8	84	0.74	Building	8,240.68
Tractors/Loaders/Backhoes	1	6	97	0.37	Building	3,568.51
Welders	6	8	46	0.45	Building	16,465.45
Air Compressors	4	6	78	0.48	Building	14,890.50
Air Compressors	1	6	78	0.48	Arch Coating	1,161.67
Forklifts	1	6	89	0.20	Arch Coating	552.29
Pavers	1	8	130	0.42	Paving	1,015.91
Paving Equipment	1	8	132	0.36	Paving	884.17
Tractors/Loaders/Backhoes	2	8	97	0.37	Paving	1,484.77
Rollers	1	8	80	0.38	Paving	628.82
Cement and Mixers	1	8	9	0.56	Paving	104.25
Total Fuel Used						79,087.73
						(Gallons)

Construction Phase	Days of Operation
Demolition Phase	45
Site Preparation Phase	21
Grading Phase	20
Building Construction Phase	282
Architectural Coating Phase	88
Paving	44
Total Days	500

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	24.0	18	10.8	364.50
Site Prep Phase	24.0	13	10.8	122.85
Grading Phase	24.0	18	10.8	162.00
Building Phase	24.0	77	10.8	9771.30
Paving Phase	24.0	6	10.8	237.60
Architectural Coating Phase	24.0	2	10.8	39.60
Total				10,697.85

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Demolition	7.4	447	10.8	652.38
Site Prep Phase	7.4	0	10.8	0.00
Grading Phase	7.4	0	10.8	0.00
Building Phase	7.4	0	10.8	0.00
Paving Phase	7.4	0	10.8	0.00
Architectural Coating Phase	7.4	0	10.8	0.00
Total				652.38
VENDOR TRIPS				
Demolition	7.4	0	7.3	0.00
Site Prep Phase	7.4	0	7.3	0.00
Grading Phase	7.4	0	7.3	0.00
Building Phase	7.4	35	7.3	9736.62
Paving Phase	7.4	0	7.3	0.00
Architectural Coating Phase	7.4	0	7.3	0.00
Total				8.00

Total Gasoline Consumption (gallons)	10,697.85
Total Diesel Consumption (gallons)	79,748.11

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf>.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: <https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsntire2018q4.pdf>.

399 Forbes R&D Office

Last Updated:

Populate one of the following tables (Leave the other blank):

Annual VMT	OR	Daily Vehicle Trips
Annual VMT: 700,920		Daily Vehicle Trips: Average Trip Distance:

Fleet Class	Fleet Mix	Fuel Economy (MPG) [1]	
Light Duty Auto (LDA)	0.552712	LDA	31.55
Light Duty Truck 1 (LDT1)	0.042774	LDT1	26.46
Light Duty Truck 2 (LDT2)	0.202769	LDT2	23.84
Medium Duty Vehicle (MDV)	0.116939	MDV	17.05
Light Heavy Duty 1 (LHD1)	0.015078	LHD1	20.45
Light Heavy Duty 2 (LHD2)	0.005847	LHD2	19.12
Medium Heavy Duty (MHD)	0.021692	T6 Public	9.03
Heavy Heavy Duty (HHD)	0.031910	T7 Public	5.29
Other Bus (OBUS)	0.002110	OBUS	8.26
Urban Bus (UBUS)	0.001769	UBUS	5.17
School Bus (SBUS)	0.004822	SBUS	7.25
Motorhome (MH)	0.000710	MH	10.72
Motorcycle (MCY)	0.000869	MCY	38.05

Fleet Mix					
Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Light Duty Auto (LDA)		<i>Gasoline</i>	387,406.90		12277.44099
Light Duty Truck 1 (LDT1)		<i>Gasoline</i>	29,981.15		1132.928621
Light Duty Truck 2 (LDT2)		<i>Gasoline</i>	142,124.85		5962.471959
Medium Duty Vehicle (MDV)		<i>Gasoline</i>	81,964.88		4806.749889
Light Heavy Duty 1 (LHD1)		<i>Diesel</i>	10,568.47		516.893854
Light Heavy Duty 2 (LHD2)		<i>Diesel</i>	4,098.28		214.3380264
Medium Heavy Duty (MHD)		<i>Diesel</i>	15,204.36		1683.812801
Heavy Heavy Duty (HHD)		<i>Diesel</i>	22,366.36		4225.755345
Other Bus (OBUS)		<i>Diesel</i>	1,478.94		179.1016084
Urban Bus (UBUS)		<i>Diesel</i>	1,239.93		239.6522332
School Bus (SBUS)		<i>Diesel</i>	3,379.84		466.0072853
Motorhome (MH)		<i>Diesel</i>	497.65		46.43974289
Motorcycle (MCY)		<i>Gasoline</i>	609.10		16.00890235

Total Gasoline Consumption (gallons)	24,195.60
Total Diesel Consumption (gallons)	7,572.00

Sources:

[1] California Air Resources Board (CARB). 2015. "EMFAC2014 Web Database." December 14, 2015. <https://www.arb.ca.gov/emfac/2014/> (accessed March 15, 2019).

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: Salinas Airport Least Project

Vehicle Population Breakdown*	
263889	Gasoline vehicles
6438	Diesel vehicles
97.6%	Gasoline vehicle %
2.4%	Diesel vehicle %

VMT per Vehicle Type	
1576360	Project VMT (CalEEMod output)
1538819	Gasoline vehicle VMT
37541	Diesel vehicle VMT

Gasoline Vehicles	
97.6%	Gasoline vehicle %
0.4434	Tons per year mobile NOX emissions (annual output in CalEEMod)
0.43	Gasoline vehicle tons per year NOX emissions
4.16%	Percentage to convert NOX emissions to N2O **
0.0180	Tons per year N2O emissions for gasoline vehicles
0.0163	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
0.3316	grams N2O per gallon of fuel for diesel vehicles**
27.13	Diesel average miles per gallon*
0.01222	grams per mile N2O for diesel vehicles
458.9	grams per year N2O for diesel vehicles
0.0004589	Metric tons per year N2O emissions for diesel vehicles

CO2E Emissions from N2O	
0.0168	Metric tons per year from gasoline + diesel vehicles
265	GWP of N2O***
4.5	CO2E emissions per year from N2O emissions from gasoline + diesel vehicles

Sources
<p>*Vehicle population source: EMFAC2014 (v1.0.7) Emissions Inventory Region Type: Air District Region: SCAQMD Calendar Year: 2022 Season: Annual Vehicle Classification: EMFAC2011 Categories</p> <p>**Methodology source: EMFAC2011 Frequently Asked Questions https://www.arb.ca.gov/msei/emfac2011-faq.htm</p> <p>***GWP source: Intergovernmental Panel on Climate Change (IPCC). 2014. AR5 Climate Change 2014 Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.</p>