Appendix A

CALEEMOD CONSTRUCTION EMISSION DATA

Valiano - Grading (Phase 1 - N 1 & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phasing obtained from applicant.

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Landscape Equipment - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	74.00
tblConstructionPhase	NumDays	40.00	29.00
tblConstructionPhase	PhaseEndDate	5/26/2016	5/29/2016
tblConstructionPhase	PhaseEndDate	2/12/2016	2/13/2016
tblConstructionPhase	PhaseStartDate	2/14/2016	2/16/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00

tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5494	74.8958	50.0322	0.0638	18.8371	3.5855	21.7769	10.3123	3.2986	13.0169	0.0000	6,588.6871	6,588.6871	1.9437	0.0000	6,629.5046
Total	**6.5494**	**74.8958**	**50.0322**	**0.0638**	**18.8371**	**3.5855**	**21.7769**	**10.3123**	**3.2986**	**13.0169**	**0.0000**	**6,588.6871**	**6,588.6871**	**1.9437**	**0.0000**	**6,629.5046**

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					
2016	0.8263	2.8682	35.6735	0.0638	8.5580	0.0517	8.5909	4.6621	0.0516	4.6949	0.0000	6,588.6871	6,588.6871	1.9437	0.0000	6,629.5046
Total	**0.8263**	**2.8682**	**35.6735**	**0.0638**	**8.5580**	**0.0517**	**8.5909**	**4.6621**	**0.0516**	**4.6949**	**0.0000**	**6,588.6871**	**6,588.6871**	**1.9437**	**0.0000**	**6,629.5046**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**87.38**	**96.17**	**28.70**	**0.00**	**54.57**	**98.56**	**60.55**	**54.79**	**98.44**	**63.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/5/2016	2/13/2016	5	29	
2	Grading	Grading	2/16/2016	5/29/2016	5	74	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.6892	0.0000	18.6892	10.2731	0.0000	10.2731			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.6892**	**2.9387**	**21.6279**	**10.2731**	**2.7036**	**12.9767**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4102	0.0000	8.4102	4.6229	0.0000	4.6229			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.4102**	**0.0317**	**8.4419**	**4.6229**	**0.0317**	**4.6546**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7905	0.0000	8.7905	3.6451	0.0000	3.6451			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.7905**	**3.5842**	**12.3748**	**3.6451**	**3.2975**	**6.9426**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0699	0.0820	0.8948	2.0800e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		173.7064	173.7064	8.7000e-003		173.8892
Total	**0.0699**	**0.0820**	**0.8948**	**2.0800e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**173.7064**	**173.7064**	**8.7000e-003**		**173.8892**

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					3.9557	0.0000	3.9557	1.6403	0.0000	1.6403			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9557**	**0.0504**	**4.0062**	**1.6403**	**0.0504**	**1.6907**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0699	0.0820	0.8948	2.0800e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		173.7064	173.7064	8.7000e-003		173.8892
Total	**0.0699**	**0.0820**	**0.8948**	**2.0800e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**173.7064**	**173.7064**	**8.7000e-003**		**173.8892**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509376	0.073655	0.192210	0.135105	0.037177	0.005354	0.012300	0.020284	0.001820	0.002092	0.006537	0.000620	0.003469

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 1 - N 1 & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phasing obtained from applicant.

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Landscape Equipment - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	74.00
tblConstructionPhase	NumDays	40.00	29.00
tblConstructionPhase	PhaseEndDate	5/26/2016	5/29/2016
tblConstructionPhase	PhaseEndDate	2/12/2016	2/13/2016
tblConstructionPhase	PhaseStartDate	2/14/2016	2/16/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00

tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5536	74.9058	50.0067	0.0637	18.8371	3.5855	21.7769	10.3123	3.2986	13.0169	0.0000	6,578.1150	6,578.1150	1.9437	0.0000	6,618.9325
Total	**6.5536**	**74.9058**	**50.0067**	**0.0637**	**18.8371**	**3.5855**	**21.7769**	**10.3123**	**3.2986**	**13.0169**	**0.0000**	**6,578.1150**	**6,578.1150**	**1.9437**	**0.0000**	**6,618.9325**

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					
2016	0.8305	2.8782	35.6480	0.0637	8.5580	0.0517	8.5909	4.6621	0.0516	4.6949	0.0000	6,578.1150	6,578.1150	1.9437	0.0000	6,618.9325
Total	**0.8305**	**2.8782**	**35.6480**	**0.0637**	**8.5580**	**0.0517**	**8.5909**	**4.6621**	**0.0516**	**4.6949**	**0.0000**	**6,578.1150**	**6,578.1150**	**1.9437**	**0.0000**	**6,618.9325**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**87.33**	**96.16**	**28.71**	**0.00**	**54.57**	**98.56**	**60.55**	**54.79**	**98.44**	**63.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/5/2016	2/13/2016	5	29	
2	Grading	Grading	2/16/2016	5/29/2016	5	74	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.6892	0.0000	18.6892	10.2731	0.0000	10.2731			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.6892**	**2.9387**	**21.6279**	**10.2731**	**2.7036**	**12.9767**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4102	0.0000	8.4102	4.6229	0.0000	4.6229			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.4102**	**0.0317**	**8.4419**	**4.6229**	**0.0317**	**4.6546**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7905	0.0000	8.7905	3.6451	0.0000	3.6451			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.7905**	**3.5842**	**12.3748**	**3.6451**	**3.2975**	**6.9426**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0741	0.0921	0.8693	1.9500e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		163.1343	163.1343	8.7000e-003		163.3171
Total	**0.0741**	**0.0921**	**0.8693**	**1.9500e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**163.1343**	**163.1343**	**8.7000e-003**		**163.3171**

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					3.9557	0.0000	3.9557	1.6403	0.0000	1.6403			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9557**	**0.0504**	**4.0062**	**1.6403**	**0.0504**	**1.6907**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0741	0.0921	0.8693	1.9500e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		163.1343	163.1343	8.7000e-003		163.3171
Total	**0.0741**	**0.0921**	**0.8693**	**1.9500e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**163.1343**	**163.1343**	**8.7000e-003**		**163.3171**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509376	0.073655	0.192210	0.135105	0.037177	0.005354	0.012300	0.020284	0.001820	0.002092	0.006537	0.000620	0.003469

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 1 - N 1 & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Grading	0.87	0.96	0.29	0.00	0.99	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.90	0.97	0.47	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Excavators	Diesel	Tier 4 Final	2	2	Level 2	15.00
Graders	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rubber Tired Dozers	Diesel	Tier 4 Final	4	4	Level 2	15.00
Scrapers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6	6	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Excavators	2.87300E-002	3.27880E-001	2.53700E-001	3.90000E-004	1.61300E-002	1.48400E-002	0.00000E+000	3.69169E+001	3.69169E+001	1.11400E-002	0.00000E+000	3.71508E+001
Graders	3.76900E-002	3.84060E-001	1.82320E-001	2.30000E-004	2.15800E-002	1.98500E-002	0.00000E+000	2.17979E+001	2.17979E+001	6.58000E-003	0.00000E+000	2.19360E+001
Rubber Tired Dozers	9.96800E-002	1.11659E+000	8.44040E-001	7.10000E-004	5.19500E-002	4.78000E-002	0.00000E+000	6.74367E+001	6.74367E+001	2.03400E-002	0.00000E+000	6.78639E+001
Scrapers	1.02300E-001	1.30208E+000	8.15590E-001	1.10000E-003	5.24800E-002	4.82800E-002	0.00000E+000	1.03885E+002	1.03885E+002	3.13400E-002	0.00000E+000	1.04543E+002
Tractors/Loaders/ Backhoes	4.49600E-002	4.29670E-001	3.18470E-001	4.10000E-004	3.30800E-002	3.04400E-002	0.00000E+000	3.87598E+001	3.87598E+001	1.16900E-002	0.00000E+000	3.90054E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Excavators	4.82000E-003	1.77600E-002	2.97270E-001	3.90000E-004	3.20000E-004	3.20000E-004	0.00000E+000	3.69169E+001	3.69169E+001	1.11400E-002	0.00000E+000	3.71507E+001
Graders	2.79000E-003	1.02900E-002	1.72250E-001	2.30000E-004	1.90000E-004	1.90000E-004	0.00000E+000	2.17979E+001	2.17979E+001	6.58000E-003	0.00000E+000	2.19359E+001
Rubber Tired Dozers	8.69000E-003	3.20000E-002	3.18600E-001	7.10000E-004	5.80000E-004	5.80000E-004	0.00000E+000	6.74367E+001	6.74367E+001	2.03400E-002	0.00000E+000	6.78638E+001
Scrapers	1.35700E-002	4.99800E-002	4.97540E-001	1.10000E-003	9.00000E-004	9.00000E-004	0.00000E+000	1.03884E+002	1.03884E+002	3.13400E-002	0.00000E+000	1.04543E+002
Tractors/Loaders/Backhoes	5.01000E-003	1.84700E-002	3.09150E-001	4.10000E-004	3.30000E-004	3.30000E-004	0.00000E+000	3.87598E+001	3.87598E+001	1.16900E-002	0.00000E+000	3.90053E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Excavators	8.32231E-001	9.45834E-001	-1.71738E-001	0.00000E+000	9.80161E-001	9.78437E-001	0.00000E+000	1.08351E-006	1.08351E-006	0.00000E+000	0.00000E+000	1.34587E-006
Graders	9.25975E-001	9.73207E-001	5.52326E-002	0.00000E+000	9.91196E-001	9.90428E-001	0.00000E+000	1.37628E-006	1.37628E-006	0.00000E+000	0.00000E+000	9.11745E-007
Rubber Tired Dozers	9.12821E-001	9.71341E-001	6.22530E-001	0.00000E+000	9.88835E-001	9.87866E-001	0.00000E+000	1.18630E-006	1.18630E-006	0.00000E+000	0.00000E+000	1.17883E-006
Scrapers	8.67351E-001	9.61615E-001	3.89963E-001	0.00000E+000	9.82851E-001	9.81359E-001	0.00000E+000	1.25139E-006	1.25139E-006	0.00000E+000	0.00000E+000	1.24351E-006
Tractors/Loaders/Backhoes	8.88568E-001	9.57014E-001	2.92649E-002	0.00000E+000	9.90024E-001	9.89159E-001	0.00000E+000	1.03200E-006	1.03200E-006	0.00000E+000	0.00000E+000	1.28188E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grading	Fugitive Dust	0.33	0.13	0.15	0.06	0.55	0.55
Grading	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.27	0.15	0.12	0.07	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Grading (Phase 2 - N 2)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	58.00	Dwelling Unit	18.83	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Landscape Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	42525	63180
tblAreaCoating	Area_Residential_Interior	127575	189540
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	8/19/2016	8/21/2016
tblConstructionPhase	PhaseEndDate	7/8/2016	7/10/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	19.25	0.00

tblFireplaces	NumberWood	12.25	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	41.00	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	2,280,390.90	0.00
tblWater	OutdoorWaterUseRate	1,437,637.74	0.00
tblWoodstoves	NumberCatalytic	1.75	0.00
tblWoodstoves	NumberNoncatalytic	1.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5494	74.8958	50.0322	0.0638	18.2141	3.5855	21.1539	9.9699	3.2986	12.6745	0.0000	6,588.6871	6,588.6871	1.9437	0.0000	6,629.5046
Total	**6.5494**	**74.8958**	**50.0322**	**0.0638**	**18.2141**	**3.5855**	**21.1539**	**9.9699**	**3.2986**	**12.6745**	**0.0000**	**6,588.6871**	**6,588.6871**	**1.9437**	**0.0000**	**6,629.5046**

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					
2016	0.8263	2.8682	35.6735	0.0638	8.2777	0.0517	8.3105	4.5080	0.0516	4.5408	0.0000	6,588.6871	6,588.6871	1.9437	0.0000	6,629.5046
Total	**0.8263**	**2.8682**	**35.6735**	**0.0638**	**8.2777**	**0.0517**	**8.3105**	**4.5080**	**0.0516**	**4.5408**	**0.0000**	**6,588.6871**	**6,588.6871**	**1.9437**	**0.0000**	**6,629.5046**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**87.38**	**96.17**	**28.70**	**0.00**	**54.55**	**98.56**	**60.71**	**54.78**	**98.44**	**64.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/27/2016	7/10/2016	5	10	
2	Grading	Grading	7/11/2016	8/21/2016	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0699	0.0820	0.8948	2.0800e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		173.7064	173.7064	8.7000e-003		173.8892
Total	**0.0699**	**0.0820**	**0.8948**	**2.0800e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**173.7064**	**173.7064**	**8.7000e-003**		**173.8892**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0699	0.0820	0.8948	2.0800e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		173.7064	173.7064	8.7000e-003		173.8892
Total	**0.0699**	**0.0820**	**0.8948**	**2.0800e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**173.7064**	**173.7064**	**8.7000e-003**		**173.8892**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Unmitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 2 - N 2)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	58.00	Dwelling Unit	18.83	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Landscape Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	42525	63180
tblAreaCoating	Area_Residential_Interior	127575	189540
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	8/19/2016	8/21/2016
tblConstructionPhase	PhaseEndDate	7/8/2016	7/10/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	19.25	0.00

tblFireplaces	NumberWood	12.25	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	41.00	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	2,280,390.90	0.00
tblWater	OutdoorWaterUseRate	1,437,637.74	0.00
tblWoodstoves	NumberCatalytic	1.75	0.00
tblWoodstoves	NumberNoncatalytic	1.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5536	74.9058	50.0067	0.0637	18.2141	3.5855	21.1539	9.9699	3.2986	12.6745	0.0000	6,578.1150	6,578.1150	1.9437	0.0000	6,618.9325
Total	**6.5536**	**74.9058**	**50.0067**	**0.0637**	**18.2141**	**3.5855**	**21.1539**	**9.9699**	**3.2986**	**12.6745**	**0.0000**	**6,578.1150**	**6,578.1150**	**1.9437**	**0.0000**	**6,618.9325**

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					
2016	0.8305	2.8782	35.6480	0.0637	8.2777	0.0517	8.3105	4.5080	0.0516	4.5408	0.0000	6,578.1150	6,578.1150	1.9437	0.0000	6,618.9325
Total	**0.8305**	**2.8782**	**35.6480**	**0.0637**	**8.2777**	**0.0517**	**8.3105**	**4.5080**	**0.0516**	**4.5408**	**0.0000**	**6,578.1150**	**6,578.1150**	**1.9437**	**0.0000**	**6,618.9325**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**87.33**	**96.16**	**28.71**	**0.00**	**54.55**	**98.56**	**60.71**	**54.78**	**98.44**	**64.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/27/2016	7/10/2016	5	10	
2	Grading	Grading	7/11/2016	8/21/2016	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0741	0.0921	0.8693	1.9500e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		163.1343	163.1343	8.7000e-003		163.3171
Total	**0.0741**	**0.0921**	**0.8693**	**1.9500e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**163.1343**	**163.1343**	**8.7000e-003**		**163.3171**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

3.3 Grading - 2016

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	0.0741	0.0921	0.8693	1.9500e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		163.1343	163.1343	8.7000e-003		163.3171
Total	**0.0741**	**0.0921**	**0.8693**	**1.9500e-003**	**0.1643**	**1.2300e-003**	**0.1655**	**0.0436**	**1.1300e-003**	**0.0447**		**163.1343**	**163.1343**	**8.7000e-003**		**163.3171**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Unmitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 2 - N 2)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Grading	0.87	0.96	0.29	0.00	0.99	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.90	0.97	0.47	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Excavators	Diesel	Tier 4 Final	2	2	Level 2	15.00
Graders	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rubber Tired Dozers	Diesel	Tier 4 Final	4	4	Level 2	15.00
Scrapers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6	6	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Excavators	1.16500E-002	1.32920E-001	1.02850E-001	1.60000E-004	6.54000E-003	6.02000E-003	0.00000E+000	1.49663E+001	1.49663E+001	4.51000E-003	0.00000E+000	1.50611E+001
Graders	1.52800E-002	1.55700E-001	7.39100E-002	9.00000E-005	8.75000E-003	8.05000E-003	0.00000E+000	8.83698E+000	8.83698E+000	2.67000E-003	0.00000E+000	8.89296E+000
Rubber Tired Dozers	3.71500E-002	4.16120E-001	3.14550E-001	2.70000E-004	1.93600E-002	1.78100E-002	0.00000E+000	2.51317E+001	2.51317E+001	7.58000E-003	0.00000E+000	2.52909E+001
Scrapers	4.14700E-002	5.27870E-001	3.30640E-001	4.50000E-004	2.12800E-002	1.95700E-002	0.00000E+000	4.21154E+001	4.21154E+001	1.27000E-002	0.00000E+000	4.23822E+001
Tractors/Loaders/ Backhoes	1.70300E-002	1.62750E-001	1.20630E-001	1.60000E-004	1.25300E-002	1.15300E-002	0.00000E+000	1.46818E+001	1.46818E+001	4.43000E-003	0.00000E+000	1.47748E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Excavators	1.95000E-003	7.20000E-003	1.20520E-001	1.60000E-004	1.30000E-004	1.30000E-004	0.00000E+000	1.49663E+001	1.49663E+001	4.51000E-003	0.00000E+000	1.50611E+001
Graders	1.13000E-003	4.17000E-003	6.98300E-002	9.00000E-005	8.00000E-005	8.00000E-005	0.00000E+000	8.83697E+000	8.83697E+000	2.67000E-003	0.00000E+000	8.89295E+000
Rubber Tired Dozers	3.24000E-003	1.19300E-002	1.18730E-001	2.70000E-004	2.20000E-004	2.20000E-004	0.00000E+000	2.51317E+001	2.51317E+001	7.58000E-003	0.00000E+000	2.52909E+001
Scrapers	5.50000E-003	2.02600E-002	2.01700E-001	4.50000E-004	3.70000E-004	3.70000E-004	0.00000E+000	4.21153E+001	4.21153E+001	1.27000E-002	0.00000E+000	4.23821E+001
Tractors/Loaders/Backhoes	1.90000E-003	6.99000E-003	1.17100E-001	1.60000E-004	1.30000E-004	1.30000E-004	0.00000E+000	1.46817E+001	1.46817E+001	4.43000E-003	0.00000E+000	1.47747E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Excavators	8.32618E-001	9.45832E-001	-1.71804E-001	0.00000E+000	9.80122E-001	9.78405E-001	0.00000E+000	1.33633E-006	1.33633E-006	0.00000E+000	0.00000E+000	1.32792E-006
Graders	9.26047E-001	9.73218E-001	5.52023E-002	0.00000E+000	9.90857E-001	9.90062E-001	0.00000E+000	1.13161E-006	1.13161E-006	0.00000E+000	0.00000E+000	1.12448E-006
Rubber Tired Dozers	9.12786E-001	9.71330E-001	6.22540E-001	0.00000E+000	9.88636E-001	9.87647E-001	0.00000E+000	1.19371E-006	1.19371E-006	0.00000E+000	0.00000E+000	1.18620E-006
Scrapers	8.67374E-001	9.61619E-001	3.89971E-001	0.00000E+000	9.82613E-001	9.81094E-001	0.00000E+000	1.18721E-006	1.18721E-006	0.00000E+000	0.00000E+000	1.17974E-006
Tractors/Loaders/Backhoes	8.88432E-001	9.57051E-001	2.92630E-002	0.00000E+000	9.89625E-001	9.88725E-001	0.00000E+000	6.81118E-007	6.81118E-007	0.00000E+000	0.00000E+000	6.76830E-007

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grading	Fugitive Dust	0.13	0.05	0.06	0.02	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.09	0.05	0.04	0.02	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Grading (Phase 3 - N 3)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	35.00	Dwelling Unit	11.36	63,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Based on schedule provided by applicant

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction Only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	PhaseEndDate	3/3/2017	3/4/2017
tblConstructionPhase	PhaseEndDate	1/13/2017	1/15/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	41.80	0.00
tblFireplaces	NumberWood	26.60	0.00
tblProjectCharacteristics	OperationalYear	2014	2020

tblSolidWaste	SolidWasteGenerationRate	88.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,951,705.95	0.00
tblWater	OutdoorWaterUseRate	3,121,727.66	0.00
tblWoodstoves	NumberCatalytic	3.80	0.00
tblWoodstoves	NumberNoncatalytic	3.80	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1627	69.6666	47.6143	0.0638	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	6,480.3725	6,480.3725	1.9425	0.0000	6,521.1641
Total	**6.1627**	**69.6666**	**47.6143**	**0.0638**	**18.2141**	**3.3184**	**20.9694**	**9.9699**	**3.0529**	**12.5048**	**0.0000**	**6,480.3725**	**6,480.3725**	**1.9425**	**0.0000**	**6,521.1641**

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					
2017	0.8200	2.8607	35.5880	0.0638	8.2777	0.0516	8.3105	4.5080	0.0515	4.5407	0.0000	6,480.3725	6,480.3725	1.9425	0.0000	6,521.1641
Total	**0.8200**	**2.8607**	**35.5880**	**0.0638**	**8.2777**	**0.0516**	**8.3105**	**4.5080**	**0.0515**	**4.5407**	**0.0000**	**6,480.3725**	**6,480.3725**	**1.9425**	**0.0000**	**6,521.1641**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**86.69**	**95.89**	**25.26**	**0.00**	**54.55**	**98.44**	**60.37**	**54.78**	**98.31**	**63.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2017	1/15/2017	5	10	
2	Grading	Grading	1/16/2017	3/4/2017	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
Total	**0.0572**	**0.0671**	**0.7284**	**1.8700e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**150.3031**	**150.3031**	**7.2500e-003**		**150.4553**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
Total	**0.0572**	**0.0671**	**0.7284**	**1.8700e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**150.3031**	**150.3031**	**7.2500e-003**		**150.4553**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	**0.0635**	**0.0746**	**0.8093**	**2.0800e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**167.0035**	**167.0035**	**8.0500e-003**		**167.1726**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	**0.0635**	**0.0746**	**0.8093**	**2.0800e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**167.0035**	**167.0035**	**8.0500e-003**		**167.1726**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Unmitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 3 - N 3)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	35.00	Dwelling Unit	11.36	63,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Based on schedule provided by applicant

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction Only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	PhaseEndDate	3/3/2017	3/4/2017
tblConstructionPhase	PhaseEndDate	1/13/2017	1/15/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	41.80	0.00
tblFireplaces	NumberWood	26.60	0.00
tblProjectCharacteristics	OperationalYear	2014	2020

tblSolidWaste	SolidWasteGenerationRate	88.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,951,705.95	0.00
tblWater	OutdoorWaterUseRate	3,121,727.66	0.00
tblWoodstoves	NumberCatalytic	3.80	0.00
tblWoodstoves	NumberNoncatalytic	3.80	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1663	69.6757	47.5874	0.0637	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	6,470.1987	6,470.1987	1.9425	0.0000	6,510.9902
Total	**6.1663**	**69.6757**	**47.5874**	**0.0637**	**18.2141**	**3.3184**	**20.9694**	**9.9699**	**3.0529**	**12.5048**	**0.0000**	**6,470.1987**	**6,470.1987**	**1.9425**	**0.0000**	**6,510.9902**

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					
2017	0.8236	2.8698	35.5611	0.0637	8.2777	0.0516	8.3105	4.5080	0.0515	4.5407	0.0000	6,470.1986	6,470.1986	1.9425	0.0000	6,510.9902
Total	**0.8236**	**2.8698**	**35.5611**	**0.0637**	**8.2777**	**0.0516**	**8.3105**	**4.5080**	**0.0515**	**4.5407**	**0.0000**	**6,470.1986**	**6,470.1986**	**1.9425**	**0.0000**	**6,510.9902**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**86.64**	**95.88**	**25.27**	**0.00**	**54.55**	**98.44**	**60.37**	**54.78**	**98.31**	**63.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2017	1/15/2017	5	10	
2	Grading	Grading	1/16/2017	3/4/2017	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**141.1467**	**141.1467**	**7.2500e-003**		**141.2989**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**141.1467**	**141.1467**	**7.2500e-003**		**141.2989**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**156.8296**	**156.8296**	**8.0500e-003**		**156.9987**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**156.8296**	**156.8296**	**8.0500e-003**		**156.9987**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Unmitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 3 - N 3)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Grading	0.87	0.96	0.25	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.89	0.96	0.45	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Excavators	Diesel	Tier 4 Final	2	2	Level 2	15.00
Graders	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rubber Tired Dozers	Diesel	Tier 4 Final	4	4	Level 2	15.00
Scrapers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6	6	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Excavators	1.26800E-002	1.40590E-001	1.19740E-001	1.90000E-004	6.92000E-003	6.36000E-003	0.00000E+000	1.71859E+001	1.71859E+001	5.27000E-003	0.00000E+000	1.72964E+001
Graders	1.66700E-002	1.68720E-001	8.46700E-002	1.10000E-004	9.48000E-003	8.72000E-003	0.00000E+000	1.01224E+001	1.01224E+001	3.10000E-003	0.00000E+000	1.01875E+001
Rubber Tired Dozers	3.86900E-002	4.28760E-001	3.23070E-001	2.90000E-004	1.99200E-002	1.83200E-002	0.00000E+000	2.68303E+001	2.68303E+001	8.22000E-003	0.00000E+000	2.70029E+001
Scrapers	4.54700E-002	5.71140E-001	3.56940E-001	5.20000E-004	2.29200E-002	2.10900E-002	0.00000E+000	4.83687E+001	4.83687E+001	1.48200E-002	0.00000E+000	4.86799E+001
Tractors/Loaders/ Backhoes	1.74200E-002	1.67410E-001	1.31660E-001	1.70000E-004	1.25900E-002	1.15800E-002	0.00000E+000	1.58799E+001	1.58799E+001	4.87000E-003	0.00000E+000	1.59821E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Excavators	2.28000E-003	8.40000E-003	1.40600E-001	1.90000E-004	1.50000E-004	1.50000E-004	0.00000E+000	1.71858E+001	1.71858E+001	5.27000E-003	0.00000E+000	1.72964E+001
Graders	1.32000E-003	4.87000E-003	8.14700E-002	1.10000E-004	9.00000E-005	9.00000E-005	0.00000E+000	1.01224E+001	1.01224E+001	3.10000E-003	0.00000E+000	1.01875E+001
Rubber Tired Dozers	3.51000E-003	1.29200E-002	1.28630E-001	2.90000E-004	2.30000E-004	2.30000E-004	0.00000E+000	2.68302E+001	2.68302E+001	8.22000E-003	0.00000E+000	2.70029E+001
Scrapers	6.42000E-003	2.36400E-002	2.35320E-001	5.20000E-004	4.30000E-004	4.30000E-004	0.00000E+000	4.83686E+001	4.83686E+001	1.48200E-002	0.00000E+000	4.86799E+001
Tractors/Loaders/Backhoes	2.09000E-003	7.69000E-003	1.28810E-001	1.70000E-004	1.40000E-004	1.40000E-004	0.00000E+000	1.58799E+001	1.58799E+001	4.87000E-003	0.00000E+000	1.59820E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Excavators	8.20189E-001	9.40252E-001	-1.74211E-001	0.00000E+000	9.78324E-001	9.76415E-001	0.00000E+000	1.16375E-006	1.16375E-006	0.00000E+000	0.00000E+000	1.15631E-006
Graders	9.20816E-001	9.71136E-001	3.77938E-002	0.00000E+000	9.90506E-001	9.89679E-001	0.00000E+000	9.87909E-007	9.87909E-007	0.00000E+000	0.00000E+000	9.81593E-007
Rubber Tired Dozers	9.09279E-001	9.69867E-001	6.01851E-001	0.00000E+000	9.88454E-001	9.87445E-001	0.00000E+000	1.49085E-006	1.49085E-006	0.00000E+000	0.00000E+000	1.11099E-006
Scrapers	8.58808E-001	9.58609E-001	3.40730E-001	0.00000E+000	9.81239E-001	9.79611E-001	0.00000E+000	1.03373E-006	1.03373E-006	0.00000E+000	0.00000E+000	1.02712E-006
Tractors/Loaders/Backhoes	8.80023E-001	9.54065E-001	2.16467E-002	0.00000E+000	9.88880E-001	9.87910E-001	0.00000E+000	1.25946E-006	1.25946E-006	0.00000E+000	0.00000E+000	1.25140E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grading	Fugitive Dust	0.15	0.06	0.07	0.03	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.09	0.05	0.04	0.02	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Grading (Phase 4 - N 4)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phasing obtained from applicant.

Grading -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	9/29/2017	9/30/2017
tblConstructionPhase	PhaseEndDate	7/28/2017	7/29/2017
tblConstructionPhase	PhaseStartDate	7/30/2017	7/31/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00

tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1627	69.6666	47.6143	0.0638	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	6,480.3725	6,480.3725	1.9425	0.0000	6,521.1641
Total	**6.1627**	**69.6666**	**47.6143**	**0.0638**	**18.2141**	**3.3184**	**20.9694**	**9.9699**	**3.0529**	**12.5048**	**0.0000**	**6,480.3725**	**6,480.3725**	**1.9425**	**0.0000**	**6,521.1641**

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					
2017	0.8200	2.8607	35.5880	0.0638	8.2777	0.0516	8.3105	4.5080	0.0515	4.5407	0.0000	6,480.3725	6,480.3725	1.9425	0.0000	6,521.1641
Total	**0.8200**	**2.8607**	**35.5880**	**0.0638**	**8.2777**	**0.0516**	**8.3105**	**4.5080**	**0.0515**	**4.5407**	**0.0000**	**6,480.3725**	**6,480.3725**	**1.9425**	**0.0000**	**6,521.1641**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**86.69**	**95.89**	**25.26**	**0.00**	**54.55**	**98.44**	**60.37**	**54.78**	**98.31**	**63.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/3/2017	7/29/2017	5	20	
2	Grading	Grading	7/31/2017	9/30/2017	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
Total	**0.0572**	**0.0671**	**0.7284**	**1.8700e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**150.3031**	**150.3031**	**7.2500e-003**		**150.4553**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
Total	**0.0572**	**0.0671**	**0.7284**	**1.8700e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**150.3031**	**150.3031**	**7.2500e-003**		**150.4553**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	**0.0635**	**0.0746**	**0.8093**	**2.0800e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**167.0035**	**167.0035**	**8.0500e-003**		**167.1726**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	**0.0635**	**0.0746**	**0.8093**	**2.0800e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**167.0035**	**167.0035**	**8.0500e-003**		**167.1726**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 4 - N 4)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phasing obtained from applicant.

Grading -

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	9/29/2017	9/30/2017
tblConstructionPhase	PhaseEndDate	7/28/2017	7/29/2017
tblConstructionPhase	PhaseStartDate	7/30/2017	7/31/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00

tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	6.1663	69.6757	47.5874	0.0637	18.2141	3.3184	20.9694	9.9699	3.0529	12.5048	0.0000	6,470.1987	6,470.1987	1.9425	0.0000	6,510.9902
Total	**6.1663**	**69.6757**	**47.5874**	**0.0637**	**18.2141**	**3.3184**	**20.9694**	**9.9699**	**3.0529**	**12.5048**	**0.0000**	**6,470.1987**	**6,470.1987**	**1.9425**	**0.0000**	**6,510.9902**

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					
2017	0.8236	2.8698	35.5611	0.0637	8.2777	0.0516	8.3105	4.5080	0.0515	4.5407	0.0000	6,470.1986	6,470.1986	1.9425	0.0000	6,510.9902
Total	**0.8236**	**2.8698**	**35.5611**	**0.0637**	**8.2777**	**0.0516**	**8.3105**	**4.5080**	**0.0515**	**4.5407**	**0.0000**	**6,470.1986**	**6,470.1986**	**1.9425**	**0.0000**	**6,510.9902**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**86.64**	**95.88**	**25.27**	**0.00**	**54.55**	**98.44**	**60.37**	**54.78**	**98.31**	**63.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/3/2017	7/29/2017	5	20	
2	Grading	Grading	7/31/2017	9/30/2017	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**141.1467**	**141.1467**	**7.2500e-003**		**141.2989**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4757	1.7523	21.2415	0.0391		0.0317	0.0317		0.0317	0.0317	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**0.4757**	**1.7523**	**21.2415**	**0.0391**	**8.1298**	**0.0317**	**8.1615**	**4.4688**	**0.0317**	**4.5005**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.2 Site Preparation - 2017

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	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
Total	**0.0604**	**0.0753**	**0.7041**	**1.7600e-003**	**0.1479**	**1.0800e-003**	**0.1489**	**0.0392**	**9.9000e-004**	**0.0402**		**141.1467**	**141.1467**	**7.2500e-003**		**141.2989**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**156.8296**	**156.8296**	**8.0500e-003**		**156.9987**

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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7564	2.7861	34.7787	0.0617		0.0504	0.0504		0.0504	0.0504	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**0.7564**	**2.7861**	**34.7787**	**0.0617**	**3.9030**	**0.0504**	**3.9534**	**1.6184**	**0.0504**	**1.6689**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

3.3 Grading - 2017

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	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	**0.0671**	**0.0837**	**0.7823**	**1.9500e-003**	**0.1643**	**1.1900e-003**	**0.1655**	**0.0436**	**1.1000e-003**	**0.0447**		**156.8296**	**156.8296**	**8.0500e-003**		**156.9987**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Grading (Phase 4 - N 4)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Grading	0.87	0.96	0.25	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.89	0.96	0.45	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Excavators	Diesel	Tier 4 Final	2	2	Level 2	15.00
Graders	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rubber Tired Dozers	Diesel	Tier 4 Final	4	4	Level 2	15.00
Scrapers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6	6	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Excavators	1.63000E-002	1.80760E-001	1.53950E-001	2.40000E-004	8.89000E-003	8.18000E-003	0.00000E+000	2.20961E+001	2.20961E+001	6.77000E-003	0.00000E+000	2.22383E+001
Graders	2.14300E-002	2.16930E-001	1.08860E-001	1.40000E-004	1.21900E-002	1.12100E-002	0.00000E+000	1.30145E+001	1.30145E+001	3.99000E-003	0.00000E+000	1.30982E+001
Rubber Tired Dozers	6.24900E-002	6.92610E-001	5.21880E-001	4.70000E-004	3.21700E-002	2.96000E-002	0.00000E+000	4.33412E+001	4.33412E+001	1.32800E-002	0.00000E+000	4.36200E+001
Scrapers	5.84600E-002	7.34320E-001	4.58920E-001	6.70000E-004	2.94700E-002	2.71100E-002	0.00000E+000	6.21883E+001	6.21883E+001	1.90500E-002	0.00000E+000	6.25885E+001
Tractors/Loaders/ Backhoes	2.69300E-002	2.58730E-001	2.03480E-001	2.60000E-004	1.94600E-002	1.79000E-002	0.00000E+000	2.45416E+001	2.45416E+001	7.52000E-003	0.00000E+000	2.46995E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Excavators	2.93000E-003	1.08000E-002	1.80770E-001	2.40000E-004	2.00000E-004	2.00000E-004	0.00000E+000	2.20961E+001	2.20961E+001	6.77000E-003	0.00000E+000	2.22383E+001
Graders	1.70000E-003	6.26000E-003	1.04750E-001	1.40000E-004	1.10000E-004	1.10000E-004	0.00000E+000	1.30145E+001	1.30145E+001	3.99000E-003	0.00000E+000	1.30982E+001
Rubber Tired Dozers	5.67000E-003	2.08700E-002	2.07780E-001	4.70000E-004	3.80000E-004	3.80000E-004	0.00000E+000	4.33411E+001	4.33411E+001	1.32800E-002	0.00000E+000	4.36200E+001
Scrapers	8.25000E-003	3.03900E-002	3.02560E-001	6.70000E-004	5.50000E-004	5.50000E-004	0.00000E+000	6.21882E+001	6.21882E+001	1.90500E-002	0.00000E+000	6.25884E+001
Tractors/Loaders/Backhoes	3.23000E-003	1.18900E-002	1.99080E-001	2.60000E-004	2.20000E-004	2.20000E-004	0.00000E+000	2.45416E+001	2.45416E+001	7.52000E-003	0.00000E+000	2.46995E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Excavators	8.20245E-001	9.40252E-001	-1.74212E-001	0.00000E+000	9.77503E-001	9.75550E-001	0.00000E+000	1.35771E-006	1.35771E-006	0.00000E+000	0.00000E+000	8.99351E-007
Graders	9.20672E-001	9.71143E-001	3.77549E-002	0.00000E+000	9.90976E-001	9.90187E-001	0.00000E+000	1.53675E-006	1.53675E-006	0.00000E+000	0.00000E+000	1.52692E-006
Rubber Tired Dozers	9.09265E-001	9.69868E-001	6.01862E-001	0.00000E+000	9.88188E-001	9.87162E-001	0.00000E+000	1.38437E-006	1.38437E-006	0.00000E+000	0.00000E+000	1.14626E-006
Scrapers	8.58878E-001	9.58615E-001	3.40713E-001	0.00000E+000	9.81337E-001	9.79712E-001	0.00000E+000	1.28642E-006	1.28642E-006	0.00000E+000	0.00000E+000	1.27819E-006
Tractors/Loaders/Backhoes	8.80059E-001	9.54045E-001	2.16237E-002	0.00000E+000	9.88695E-001	9.87709E-001	0.00000E+000	1.22241E-006	1.22241E-006	0.00000E+000	0.00000E+000	1.21460E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grading	Fugitive Dust	0.20	0.08	0.09	0.04	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.18	0.10	0.08	0.04	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.20	0.49		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Backbone Infrastructure (Phase 1 - N 1 & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the project phasing given by client.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00

tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.6356	37.9831	21.2954	0.0417	0.1232	1.9449	2.0681	0.0327	1.7893	1.8220	0.0000	4,302.6197	4,302.6197	1.2651	0.0000	4,329.1858
Total	**3.6356**	**37.9831**	**21.2954**	**0.0417**	**0.1232**	**1.9449**	**2.0681**	**0.0327**	**1.7893**	**1.8220**	**0.0000**	**4,302.6197**	**4,302.6197**	**1.2651**	**0.0000**	**4,329.1858**

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					
2016	0.5440	1.8720	22.9398	0.0417	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,302.6197	4,302.6197	1.2651	0.0000	4,329.1858
Total	**0.5440**	**1.8720**	**22.9398**	**0.0417**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,302.6197**	**4,302.6197**	**1.2651**	**0.0000**	**4,329.1858**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**85.04**	**95.07**	**-7.72**	**0.00**	**0.00**	**98.27**	**92.41**	**0.00**	**98.12**	**96.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	7/6/2016	11/2/2016	5	86	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Backbone Infrastructure - 2016

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	3.5831	37.9215	20.6244	0.0402		1.9439	1.9439		1.7884	1.7884		4,172.3399	4,172.3399	1.2585		4,198.7689
Total	**3.5831**	**37.9215**	**20.6244**	**0.0402**		**1.9439**	**1.9439**		**1.7884**	**1.7884**		**4,172.3399**	**4,172.3399**	**1.2585**		**4,198.7689**

3.2 Backbone Infrastructure - 2016

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	0.0524	0.0615	0.6711	1.5600e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		130.2798	130.2798	6.5300e-003		130.4169
Total	**0.0524**	**0.0615**	**0.6711**	**1.5600e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**130.2798**	**130.2798**	**6.5300e-003**		**130.4169**

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	0.4915	1.8105	22.2687	0.0402		0.0328	0.0328		0.0328	0.0328	0.0000	4,172.3399	4,172.3399	1.2585		4,198.7689
Total	**0.4915**	**1.8105**	**22.2687**	**0.0402**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,172.3399**	**4,172.3399**	**1.2585**		**4,198.7689**

3.2 Backbone Infrastructure - 2016

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	0.0524	0.0615	0.6711	1.5600e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		130.2798	130.2798	6.5300e-003		130.4169
Total	**0.0524**	**0.0615**	**0.6711**	**1.5600e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**130.2798**	**130.2798**	**6.5300e-003**		**130.4169**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 1 - N 1 & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the project phasing given by client.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00

tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.6387	37.9906	21.2763	0.0416	0.1232	1.9449	2.0681	0.0327	1.7893	1.8220	0.0000	4,294.6906	4,294.6906	1.2651	0.0000	4,321.2567
Total	**3.6387**	**37.9906**	**21.2763**	**0.0416**	**0.1232**	**1.9449**	**2.0681**	**0.0327**	**1.7893**	**1.8220**	**0.0000**	**4,294.6906**	**4,294.6906**	**1.2651**	**0.0000**	**4,321.2567**

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					
2016	0.5471	1.8795	22.9206	0.0416	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,294.6906	4,294.6906	1.2651	0.0000	4,321.2567
Total	**0.5471**	**1.8795**	**22.9206**	**0.0416**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,294.6906**	**4,294.6906**	**1.2651**	**0.0000**	**4,321.2567**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**84.96**	**95.05**	**-7.73**	**0.00**	**0.00**	**98.27**	**92.41**	**0.00**	**98.12**	**96.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	7/6/2016	11/2/2016	5	86	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Backbone Infrastructure - 2016

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	3.5831	37.9215	20.6244	0.0402		1.9439	1.9439		1.7884	1.7884		4,172.3399	4,172.3399	1.2585		4,198.7689
Total	**3.5831**	**37.9215**	**20.6244**	**0.0402**		**1.9439**	**1.9439**		**1.7884**	**1.7884**		**4,172.3399**	**4,172.3399**	**1.2585**		**4,198.7689**

3.2 Backbone Infrastructure - 2016

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	0.0556	0.0690	0.6519	1.4700e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		122.3507	122.3507	6.5300e-003		122.4878
Total	**0.0556**	**0.0690**	**0.6519**	**1.4700e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**122.3507**	**122.3507**	**6.5300e-003**		**122.4878**

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	0.4915	1.8105	22.2687	0.0402		0.0328	0.0328		0.0328	0.0328	0.0000	4,172.3399	4,172.3399	1.2585		4,198.7689
Total	**0.4915**	**1.8105**	**22.2687**	**0.0402**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,172.3399**	**4,172.3399**	**1.2585**		**4,198.7689**

3.2 Backbone Infrastructure - 2016

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	0.0556	0.0690	0.6519	1.4700e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		122.3507	122.3507	6.5300e-003		122.4878
Total	**0.0556**	**0.0690**	**0.6519**	**1.4700e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**122.3507**	**122.3507**	**6.5300e-003**		**122.4878**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 1 - N 1 & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Backbone Infrastructure	0.85	0.95	-0.08	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Forklifts	Diesel	Tier 4 Final	1	1	Level 2	15.00
Off-Highway Trucks	Diesel	Tier 4 Final	2	2	Level 2	15.00
Other Material Handling Equipment	Diesel	Tier 4 Final	1	1	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1	1	Level 2	15.00
Trenchers	Diesel	Tier 4 Final	1	1	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Forklifts	9.76000E-003	8.39900E-002	5.43100E-002	7.00000E-005	7.02000E-003	6.46000E-003	0.00000E+000	6.19158E+000	6.19158E+000	1.87000E-003	0.00000E+000	6.23080E+000
Off-Highway Trucks	8.10100E-002	9.33270E-001	4.34640E-001	1.13000E-003	3.52100E-002	3.23900E-002	0.00000E+000	1.06638E+002	1.06638E+002	3.21700E-002	0.00000E+000	1.07314E+002
Other Material Handling Equipment	2.47600E-002	2.64020E-001	1.73170E-001	2.50000E-004	1.41600E-002	1.30300E-002	0.00000E+000	2.32698E+001	2.32698E+001	7.02000E-003	0.00000E+000	2.34172E+001
Tractors/Loaders/ Backhoes	1.46400E-002	1.39970E-001	1.03740E-001	1.30000E-004	1.07800E-002	9.91000E-003	0.00000E+000	1.26263E+001	1.26263E+001	3.81000E-003	0.00000E+000	1.27063E+001
Trenchers	2.39000E-002	2.09380E-001	1.20990E-001	1.50000E-004	1.64200E-002	1.51100E-002	0.00000E+000	1.40325E+001	1.40325E+001	4.23000E-003	0.00000E+000	1.41214E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Forklifts	8.10000E-004	2.98000E-003	4.99500E-002	7.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	6.19157E+000	6.19157E+000	1.87000E-003	0.00000E+000	6.23079E+000
Off-Highway Trucks	1.38300E-002	5.09500E-002	5.07210E-001	1.13000E-003	9.20000E-004	9.20000E-004	0.00000E+000	1.06638E+002	1.06638E+002	3.21700E-002	0.00000E+000	1.07314E+002
Other Material Handling Equipment	3.04000E-003	1.12000E-002	1.87440E-001	2.50000E-004	2.00000E-004	2.00000E-004	0.00000E+000	2.32698E+001	2.32698E+001	7.02000E-003	0.00000E+000	2.34172E+001
Tractors/Loaders/Backhoes	1.63000E-003	6.02000E-003	1.00710E-001	1.30000E-004	1.10000E-004	1.10000E-004	0.00000E+000	1.26263E+001	1.26263E+001	3.81000E-003	0.00000E+000	1.27063E+001
Trenchers	1.82000E-003	6.70000E-003	1.12240E-001	1.50000E-004	1.20000E-004	1.20000E-004	0.00000E+000	1.40325E+001	1.40325E+001	4.23000E-003	0.00000E+000	1.41214E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Forklifts	9.17008E-001	9.64520E-001	8.02799E-002	0.00000E+000	9.92877E-001	9.92260E-001	0.00000E+000	1.61510E-006	1.61510E-006	0.00000E+000	0.00000E+000	1.60493E-006
Off-Highway Trucks	8.29280E-001	9.45407E-001	-1.66966E-001	0.00000E+000	9.73871E-001	9.71596E-001	0.00000E+000	1.12530E-006	1.12530E-006	0.00000E+000	0.00000E+000	1.21140E-006
Other Material Handling Equipment	8.77221E-001	9.57579E-001	-8.24046E-002	0.00000E+000	9.85876E-001	9.84651E-001	0.00000E+000	1.28922E-006	1.28922E-006	0.00000E+000	0.00000E+000	1.28111E-006
Tractors/Loaders/Backhoes	8.88661E-001	9.56991E-001	2.92076E-002	0.00000E+000	9.89796E-001	9.88900E-001	0.00000E+000	1.58399E-006	1.58399E-006	0.00000E+000	0.00000E+000	1.57402E-006
Trenchers	9.23849E-001	9.68001E-001	7.23200E-002	0.00000E+000	9.92692E-001	9.92058E-001	0.00000E+000	7.12630E-007	7.12630E-007	0.00000E+000	0.00000E+000	1.41629E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Backbone Infrastructure	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Backbone Infrastructure	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

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

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Backbone Infrastructure (Phase 2 - N 2 & 3)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	93.00	Dwelling Unit	30.19	167,400.00	266

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the project phasing given by client.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	134865	156735
tblAreaCoating	Area_Residential_Interior	404595	470205
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	4/28/2017	4/29/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	61.05	0.00
tblFireplaces	NumberWood	38.85	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	129.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	7,232,096.84	0.00
tblWater	OutdoorWaterUseRate	4,559,365.40	0.00
tblWoodstoves	NumberCatalytic	5.55	0.00
tblWoodstoves	NumberNoncatalytic	5.55	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.3595	34.5943	20.3683	0.0417	0.1232	1.7600	1.8832	0.0327	1.6192	1.6519	0.0000	4,229.6953	4,229.6953	1.2636	0.0000	4,256.2316
Total	**3.3595**	**34.5943**	**20.3683**	**0.0417**	**0.1232**	**1.7600**	**1.8832**	**0.0327**	**1.6192**	**1.6519**	**0.0000**	**4,229.6953**	**4,229.6953**	**1.2636**	**0.0000**	**4,256.2316**

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					
2017	0.5392	1.8664	22.8756	0.0417	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,229.6953	4,229.6953	1.2636	0.0000	4,256.2316
Total	**0.5392**	**1.8664**	**22.8756**	**0.0417**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,229.6953**	**4,229.6953**	**1.2636**	**0.0000**	**4,256.2316**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**83.95**	**94.60**	**-12.31**	**0.00**	**0.00**	**98.09**	**91.67**	**0.00**	**97.92**	**95.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

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	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	1/1/2017	4/29/2017	5	85	Neighborhoods 2 and 3

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Backbone Infrastructure - 2017

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	3.3119	34.5383	19.7614	0.0401		1.7591	1.7591		1.6184	1.6184		4,104.4427	4,104.4427	1.2576		4,130.8522
Total	**3.3119**	**34.5383**	**19.7614**	**0.0401**		**1.7591**	**1.7591**		**1.6184**	**1.6184**		**4,104.4427**	**4,104.4427**	**1.2576**		**4,130.8522**

3.2 Backbone Infrastructure - 2017

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

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	0.4915	1.8105	22.2687	0.0401		0.0328	0.0328		0.0328	0.0328	0.0000	4,104.4427	4,104.4427	1.2576		4,130.8522
Total	**0.4915**	**1.8105**	**22.2687**	**0.0401**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,104.4427**	**4,104.4427**	**1.2576**		**4,130.8522**

3.2 Backbone Infrastructure - 2017

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Unmitigated	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423		13.8154	13.8154	0.0135		14.0983
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

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					
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423		13.8154	13.8154	0.0135		14.0983
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 2 - N 2 & 3)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	93.00	Dwelling Unit	30.19	167,400.00	266

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the project phasing given by client.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	134865	156735
tblAreaCoating	Area_Residential_Interior	404595	470205
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	4/28/2017	4/29/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	61.05	0.00
tblFireplaces	NumberWood	38.85	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	129.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	7,232,096.84	0.00
tblWater	OutdoorWaterUseRate	4,559,365.40	0.00
tblWoodstoves	NumberCatalytic	5.55	0.00
tblWoodstoves	NumberNoncatalytic	5.55	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	3.3622	34.6011	20.3481	0.0416	0.1232	1.7600	1.8832	0.0327	1.6192	1.6519	0.0000	4,222.0649	4,222.0649	1.2636	0.0000	4,248.6012
Total	**3.3622**	**34.6011**	**20.3481**	**0.0416**	**0.1232**	**1.7600**	**1.8832**	**0.0327**	**1.6192**	**1.6519**	**0.0000**	**4,222.0649**	**4,222.0649**	**1.2636**	**0.0000**	**4,248.6012**

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					
2017	0.5419	1.8732	22.8554	0.0416	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,222.0649	4,222.0649	1.2636	0.0000	4,248.6012
Total	**0.5419**	**1.8732**	**22.8554**	**0.0416**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,222.0649**	**4,222.0649**	**1.2636**	**0.0000**	**4,248.6012**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**83.88**	**94.59**	**-12.32**	**0.00**	**0.00**	**98.09**	**91.67**	**0.00**	**97.92**	**95.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

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	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	1/1/2017	4/29/2017	5	85	Neighborhoods 2 and 3

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Backbone Infrastructure - 2017

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	3.3119	34.5383	19.7614	0.0401		1.7591	1.7591		1.6184	1.6184		4,104.4427	4,104.4427	1.2576		4,130.8522
Total	**3.3119**	**34.5383**	**19.7614**	**0.0401**		**1.7591**	**1.7591**		**1.6184**	**1.6184**		**4,104.4427**	**4,104.4427**	**1.2576**		**4,130.8522**

3.2 Backbone Infrastructure - 2017

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

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	0.4915	1.8105	22.2687	0.0401		0.0328	0.0328		0.0328	0.0328	0.0000	4,104.4427	4,104.4427	1.2576		4,130.8522
Total	**0.4915**	**1.8105**	**22.2687**	**0.0401**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,104.4427**	**4,104.4427**	**1.2576**		**4,130.8522**

3.2 Backbone Infrastructure - 2017

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983
Unmitigated	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423	0.0000	13.8154	13.8154	0.0135	0.0000	14.0983

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423		13.8154	13.8154	0.0135		14.0983
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

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					
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2344	0.0890	7.6981	4.1000e-004		0.0423	0.0423		0.0423	0.0423		13.8154	13.8154	0.0135		14.0983
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2344**	**0.0890**	**7.6981**	**4.1000e-004**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**13.8154**	**13.8154**	**0.0135**	**0.0000**	**14.0983**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 2 - N 2 & 3)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Backbone Infrastructure	0.84	0.95	-0.12	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Forklifts	Diesel	Tier 4 Final	1	1	Level 2	15.00
Off-Highway Trucks	Diesel	Tier 4 Final	2	2	Level 2	15.00
Other Material Handling Equipment	Diesel	Tier 4 Final	1	1	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1	1	Level 2	15.00
Trenchers	Diesel	Tier 4 Final	1	1	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Forklifts	8.96000E-003	7.76200E-002	5.30900E-002	6.00000E-005	6.40000E-003	5.89000E-003	0.00000E+000	6.02446E+000	6.02446E+000	1.85000E-003	0.00000E+000	6.06322E+000
Off-Highway Trucks	7.41200E-002	8.35920E-001	3.98260E-001	1.12000E-003	3.10300E-002	2.85500E-002	0.00000E+000	1.03657E+002	1.03657E+002	3.17600E-002	0.00000E+000	1.04324E+002
Other Material Handling Equipment	2.13700E-002	2.24730E-001	1.67800E-001	2.40000E-004	1.19100E-002	1.09600E-002	0.00000E+000	2.26418E+001	2.26418E+001	6.94000E-003	0.00000E+000	2.27875E+001
Tractors/Loaders/ Backhoes	1.34600E-002	1.29360E-001	1.01740E-001	1.30000E-004	9.73000E-003	8.95000E-003	0.00000E+000	1.22708E+001	1.22708E+001	3.76000E-003	0.00000E+000	1.23498E+001
Trenchers	2.28300E-002	2.00250E-001	1.18980E-001	1.50000E-004	1.56900E-002	1.44300E-002	0.00000E+000	1.36542E+001	1.36542E+001	4.18000E-003	0.00000E+000	1.37420E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Forklifts	8.00000E-004	2.95000E-003	4.93700E-002	6.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	6.02445E+000	6.02445E+000	1.85000E-003	0.00000E+000	6.06321E+000
Off-Highway Trucks	1.36700E-002	5.03600E-002	5.01310E-001	1.12000E-003	9.10000E-004	9.10000E-004	0.00000E+000	1.03657E+002	1.03657E+002	3.17600E-002	0.00000E+000	1.04324E+002
Other Material Handling Equipment	3.00000E-003	1.10700E-002	1.85260E-001	2.40000E-004	2.00000E-004	2.00000E-004	0.00000E+000	2.26417E+001	2.26417E+001	6.94000E-003	0.00000E+000	2.27874E+001
Tractors/Loaders/Backhoes	1.61000E-003	5.95000E-003	9.95400E-002	1.30000E-004	1.10000E-004	1.10000E-004	0.00000E+000	1.22708E+001	1.22708E+001	3.76000E-003	0.00000E+000	1.23498E+001
Trenchers	1.80000E-003	6.63000E-003	1.10940E-001	1.50000E-004	1.20000E-004	1.20000E-004	0.00000E+000	1.36542E+001	1.36542E+001	4.18000E-003	0.00000E+000	1.37420E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Forklifts	9.10714E-001	9.61994E-001	7.00697E-002	0.00000E+000	9.92188E-001	9.91511E-001	0.00000E+000	1.65990E-006	1.65990E-006	0.00000E+000	0.00000E+000	1.64929E-006
Off-Highway Trucks	8.15569E-001	9.39755E-001	-2.58751E-001	0.00000E+000	9.70674E-001	9.68126E-001	0.00000E+000	1.15766E-006	1.15766E-006	0.00000E+000	0.00000E+000	1.15026E-006
Other Material Handling Equipment	8.59616E-001	9.50741E-001	-1.04052E-001	0.00000E+000	9.83207E-001	9.81752E-001	0.00000E+000	1.32499E-006	1.32499E-006	0.00000E+000	0.00000E+000	1.31651E-006
Tractors/Loaders/Backhoes	8.80386E-001	9.54004E-001	2.16237E-002	0.00000E+000	9.88695E-001	9.87709E-001	0.00000E+000	1.62988E-006	1.62988E-006	0.00000E+000	0.00000E+000	8.09732E-007
Trenchers	9.21156E-001	9.66891E-001	6.75744E-002	0.00000E+000	9.92352E-001	9.91684E-001	0.00000E+000	7.32377E-007	7.32377E-007	0.00000E+000	0.00000E+000	1.45539E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Backbone Infrastructure	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Backbone Infrastructure	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

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

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Backbone Infrastructure (Phase 3 - N 4)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the timeframe given for backbone infrastructure.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00
tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.8755	28.9215	18.9713	0.0417	0.1232	1.4382	1.5615	0.0327	1.3232	1.3559	0.0000	4,159.4068	4,159.4068	1.2630	0.0000	4,185.9292
Total	**2.8755**	**28.9215**	**18.9713**	**0.0417**	**0.1232**	**1.4382**	**1.5615**	**0.0327**	**1.3232**	**1.3559**	**0.0000**	**4,159.4068**	**4,159.4068**	**1.2630**	**0.0000**	**4,185.9292**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.5350	1.8615	22.8196	0.0417	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,159.4068	4,159.4068	1.2630	0.0000	4,185.9291
Total	**0.5350**	**1.8615**	**22.8196**	**0.0417**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,159.4068**	**4,159.4068**	**1.2630**	**0.0000**	**4,185.9291**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**81.40**	**93.56**	**-20.29**	**0.00**	**0.00**	**97.66**	**89.95**	**0.00**	**97.46**	**95.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	1/2/2018	5/1/2018	5	86	Neighborhood 4

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Backbone Infrastructure - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8321	28.8705	18.4203	0.0401		1.4374	1.4374		1.3224	1.3224		4,038.8524	4,038.8524	1.2574		4,065.2567
Total	**2.8321**	**28.8705**	**18.4203**	**0.0401**		**1.4374**	**1.4374**		**1.3224**	**1.3224**		**4,038.8524**	**4,038.8524**	**1.2574**		**4,065.2567**

3.2 Backbone Infrastructure - 2018

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

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	0.4915	1.8105	22.2687	0.0401		0.0328	0.0328		0.0328	0.0328	0.0000	4,038.8524	4,038.8524	1.2574		4,065.2567
Total	**0.4915**	**1.8105**	**22.2687**	**0.0401**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,038.8524**	**4,038.8524**	**1.2574**		**4,065.2567**

3.2 Backbone Infrastructure - 2018

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 3 - N 4)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No default established for backbone infrastructure. Scheduling was based off the timeframe given for backbone infrastructure.

Off-road Equipment -

Off-road Equipment - Equipment needed to install backbone infrastructure.

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, Level 2 DPF, and 15% oxidation catalyst

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblOffRoadEquipment	PhaseName		Backbone Infrastructure
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00
tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.8778	28.9277	18.9502	0.0416	0.1232	1.4382	1.5615	0.0327	1.3232	1.3559	0.0000	4,152.0568	4,152.0568	1.2630	0.0000	4,178.5791
Total	**2.8778**	**28.9277**	**18.9502**	**0.0416**	**0.1232**	**1.4382**	**1.5615**	**0.0327**	**1.3232**	**1.3559**	**0.0000**	**4,152.0568**	**4,152.0568**	**1.2630**	**0.0000**	**4,178.5791**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.5373	1.8677	22.7986	0.0416	0.1232	0.0337	0.1569	0.0327	0.0336	0.0663	0.0000	4,152.0568	4,152.0568	1.2630	0.0000	4,178.5791
Total	**0.5373**	**1.8677**	**22.7986**	**0.0416**	**0.1232**	**0.0337**	**0.1569**	**0.0327**	**0.0336**	**0.0663**	**0.0000**	**4,152.0568**	**4,152.0568**	**1.2630**	**0.0000**	**4,178.5791**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**81.33**	**93.54**	**-20.31**	**0.00**	**0.00**	**97.66**	**89.95**	**0.00**	**97.46**	**95.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backbone Infrastructure	Trenching	1/2/2018	5/1/2018	5	86	Neighborhood 4

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Backbone Infrastructure	Forklifts	1	8.00	89	0.20
Backbone Infrastructure	Off-Highway Trucks	2	8.00	400	0.38
Backbone Infrastructure	Other Material Handling Equipment	1	8.00	167	0.40
Backbone Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backbone Infrastructure	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Backbone Infrastructure	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Backbone Infrastructure - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8321	28.8705	18.4203	0.0401		1.4374	1.4374		1.3224	1.3224		4,038.8524	4,038.8524	1.2574		4,065.2567
Total	**2.8321**	**28.8705**	**18.4203**	**0.0401**		**1.4374**	**1.4374**		**1.3224**	**1.3224**		**4,038.8524**	**4,038.8524**	**1.2574**		**4,065.2567**

3.2 Backbone Infrastructure - 2018

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

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	0.4915	1.8105	22.2687	0.0401		0.0328	0.0328		0.0328	0.0328	0.0000	4,038.8524	4,038.8524	1.2574		4,065.2567
Total	**0.4915**	**1.8105**	**22.2687**	**0.0401**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**4,038.8524**	**4,038.8524**	**1.2574**		**4,065.2567**

3.2 Backbone Infrastructure - 2018

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Backbone Infrastructure (Phase 3 - N 4)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Backbone Infrastructure	0.81	0.94	-0.20	0.00	0.98	0.97	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Forklifts	Diesel	Tier 4 Final	1	1	Level 2	15.00
Off-Highway Trucks	Diesel	Tier 4 Final	2	2	Level 2	15.00
Other Material Handling Equipment	Diesel	Tier 4 Final	1	1	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1	1	Level 2	15.00
Trenchers	Diesel	Tier 4 Final	1	1	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Forklifts	7.66000E-003	6.77000E-002	5.20800E-002	7.00000E-005	5.40000E-003	4.97000E-003	0.00000E+000	5.99909E+000	5.99909E+000	1.87000E-003	0.00000E+000	6.03831E+000
Off-Highway Trucks	6.61700E-002	7.12390E-001	3.59540E-001	1.13000E-003	2.60000E-002	2.39200E-002	0.00000E+000	1.03218E+002	1.03218E+002	3.21300E-002	0.00000E+000	1.03893E+002
Other Material Handling Equipment	1.65400E-002	1.68820E-001	1.63030E-001	2.50000E-004	8.74000E-003	8.04000E-003	0.00000E+000	2.25464E+001	2.25464E+001	7.02000E-003	0.00000E+000	2.26938E+001
Tractors/Loaders/ Backhoes	1.14400E-002	1.13080E-001	1.00480E-001	1.30000E-004	8.01000E-003	7.37000E-003	0.00000E+000	1.22011E+001	1.22011E+001	3.80000E-003	0.00000E+000	1.22808E+001
Trenchers	1.99600E-002	1.79440E-001	1.16940E-001	1.50000E-004	1.36500E-002	1.25600E-002	0.00000E+000	1.35870E+001	1.35870E+001	4.23000E-003	0.00000E+000	1.36759E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Forklifts	8.10000E-004	2.98000E-003	4.99500E-002	7.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	5.99908E+000	5.99908E+000	1.87000E-003	0.00000E+000	6.03830E+000
Off-Highway Trucks	1.38300E-002	5.09500E-002	5.07210E-001	1.13000E-003	9.20000E-004	9.20000E-004	0.00000E+000	1.03218E+002	1.03218E+002	3.21300E-002	0.00000E+000	1.03892E+002
Other Material Handling Equipment	3.04000E-003	1.12000E-002	1.87440E-001	2.50000E-004	2.00000E-004	2.00000E-004	0.00000E+000	2.25464E+001	2.25464E+001	7.02000E-003	0.00000E+000	2.26938E+001
Tractors/Loaders/Backhoes	1.63000E-003	6.02000E-003	1.00710E-001	1.30000E-004	1.10000E-004	1.10000E-004	0.00000E+000	1.22011E+001	1.22011E+001	3.80000E-003	0.00000E+000	1.22808E+001
Trenchers	1.82000E-003	6.70000E-003	1.12240E-001	1.50000E-004	1.20000E-004	1.20000E-004	0.00000E+000	1.35870E+001	1.35870E+001	4.23000E-003	0.00000E+000	1.36759E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Forklifts	8.94256E-001	9.55982E-001	4.08986E-002	0.00000E+000	9.90741E-001	9.89940E-001	0.00000E+000	1.66692E-006	1.66692E-006	0.00000E+000	0.00000E+000	1.65609E-006
Off-Highway Trucks	7.90993E-001	9.28480E-001	-4.10719E-001	0.00000E+000	9.64615E-001	9.61538E-001	0.00000E+000	1.16259E-006	1.16259E-006	0.00000E+000	0.00000E+000	1.25129E-006
Other Material Handling Equipment	8.16203E-001	9.33657E-001	-1.49727E-001	0.00000E+000	9.77117E-001	9.75124E-001	0.00000E+000	1.33059E-006	1.33059E-006	0.00000E+000	0.00000E+000	1.32195E-006
Tractors/Loaders/Backhoes	8.57517E-001	9.46763E-001	-2.28901E-003	0.00000E+000	9.86267E-001	9.85075E-001	0.00000E+000	8.19601E-007	8.19601E-007	0.00000E+000	0.00000E+000	1.62855E-006
Trenchers	9.08818E-001	9.62662E-001	4.01916E-002	0.00000E+000	9.91209E-001	9.90446E-001	0.00000E+000	1.47199E-006	1.47199E-006	0.00000E+000	0.00000E+000	7.31215E-007

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Backbone Infrastructure	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Backbone Infrastructure	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.20	0.49		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

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

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Valiano - Vertical Development (Phase 1 - N 1 & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 3 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 3 construction crews.

Off-road Equipment -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	ReapplicationRatePercent	10	0

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	75.00	181.00
tblConstructionPhase	NumDays	1,110.00	246.00
tblConstructionPhase	NumDays	75.00	246.00
tblConstructionPhase	PhaseEndDate	6/21/2018	10/11/2017
tblConstructionPhase	PhaseEndDate	9/20/2018	10/11/2017
tblConstructionPhase	PhaseStartDate	10/12/2017	2/1/2017
tblConstructionPhase	PhaseStartDate	10/12/2017	11/2/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.8699	110.5446	76.9890	0.1177	0.8904	7.2030	8.0934	0.2394	6.7421	6.9815	0.0000	11,669.8417	11,669.8417	2.7280	0.0000	11,727.1285
2017	36.8499	104.1201	77.6967	0.1222	1.0136	6.6915	7.7051	0.2721	6.2728	6.5448	0.0000	11,913.2799	11,913.2799	2.7238	0.0000	11,970.4793
Total	**49.7198**	**214.6647**	**154.6857**	**0.2399**	**1.9041**	**13.8945**	**15.7985**	**0.5114**	**13.0149**	**13.5263**	**0.0000**	**23,583.1215**	**23,583.1215**	**5.4517**	**0.0000**	**23,697.6078**

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					
2016	1.8154	9.3344	75.8122	0.1177	0.8904	0.1191	1.0095	0.2394	0.1159	0.3553	0.0000	11,669.8416	11,669.8416	2.7280	0.0000	11,727.1285
2017	26.5868	9.2259	77.7073	0.1222	1.0136	0.1173	1.1309	0.2721	0.1144	0.3865	0.0000	11,913.2799	11,913.2799	2.7238	0.0000	11,970.4793
Total	**28.4022**	**18.5603**	**153.5194**	**0.2399**	**1.9041**	**0.2364**	**2.1404**	**0.5114**	**0.2303**	**0.7417**	**0.0000**	**23,583.1215**	**23,583.1215**	**5.4517**	**0.0000**	**23,697.6078**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**42.88**	**91.35**	**0.75**	**0.00**	**0.00**	**98.30**	**86.45**	**0.00**	**98.23**	**94.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/2/2016	10/11/2017	5	246	
2	Paving	Paving	11/2/2016	10/11/2017	5	246	
3	Architectural Coating	Architectural Coating	2/1/2017	10/11/2017	5	181	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 561,330; Residential Outdoor: 187,110; Non-Residential Indoor: 65,340; Non-Residential Outdoor: 21,780 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	3	7.00	226	0.29
Building Construction	Forklifts	9	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	9	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	27	74.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2016

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	10.2187	85.5190	55.5199	0.0804		5.9022	5.9022		5.5454	5.5454		8,007.8592	8,007.8592	1.9861		8,049.5671
Total	**10.2187**	**85.5190**	**55.5199**	**0.0804**		**5.9022**	**5.9022**		**5.5454**	**5.5454**		**8,007.8592**	**8,007.8592**	**1.9861**		**8,049.5671**

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	0.2504	2.2745	2.6698	5.7100e-003	0.1593	0.0344	0.1937	0.0455	0.0316	0.0771		572.6123	572.6123	4.4300e-003		572.7052
Worker	0.2587	0.3036	3.3106	7.7000e-003	0.6079	4.5600e-003	0.6125	0.1612	4.1900e-003	0.1654		642.7137	642.7137	0.0322		643.3899
Total	**0.5090**	**2.5781**	**5.9804**	**0.0134**	**0.7672**	**0.0390**	**0.8061**	**0.2067**	**0.0358**	**0.2425**		**1,215.3259**	**1,215.3259**	**0.0366**		**1,216.0951**

3.2 Building Construction - 2016

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	8,007.8592	8,007.8592	1.9861		8,049.5670
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**8,007.8592**	**8,007.8592**	**1.9861**		**8,049.5670**

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	0.2504	2.2745	2.6698	5.7100e-003	0.1593	0.0344	0.1937	0.0455	0.0316	0.0771		572.6123	572.6123	4.4300e-003		572.7052
Worker	0.2587	0.3036	3.3106	7.7000e-003	0.6079	4.5600e-003	0.6125	0.1612	4.1900e-003	0.1654		642.7137	642.7137	0.0322		643.3899
Total	**0.5090**	**2.5781**	**5.9804**	**0.0134**	**0.7672**	**0.0390**	**0.8061**	**0.2067**	**0.0358**	**0.2425**		**1,215.3259**	**1,215.3259**	**0.0366**		**1,216.0951**

3.2 Building Construction - 2017

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	9.3071	79.2170	54.3874	0.0804		5.3437	5.3437		5.0189	5.0189		7,919.4160	7,919.4160	1.9491		7,960.3471
Total	**9.3071**	**79.2170**	**54.3874**	**0.0804**		**5.3437**	**5.3437**		**5.0189**	**5.0189**		**7,919.4160**	**7,919.4160**	**1.9491**		**7,960.3471**

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	0.2295	2.0340	2.5059	5.7000e-003	0.1593	0.0299	0.1892	0.0455	0.0275	0.0729		562.9389	562.9389	4.1800e-003		563.0268
Worker	0.2351	0.2759	2.9943	7.7000e-003	0.6079	4.4200e-003	0.6123	0.1612	4.0800e-003	0.1653		617.9129	617.9129	0.0298		618.5386
Total	**0.4646**	**2.3099**	**5.5003**	**0.0134**	**0.7672**	**0.0343**	**0.8015**	**0.2067**	**0.0315**	**0.2382**		**1,180.8518**	**1,180.8518**	**0.0340**		**1,181.5653**

3.2 Building Construction - 2017

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,919.4160	7,919.4160	1.9491		7,960.3471
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,919.4160**	**7,919.4160**	**1.9491**		**7,960.3471**

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	0.2295	2.0340	2.5059	5.7000e-003	0.1593	0.0299	0.1892	0.0455	0.0275	0.0729		562.9389	562.9389	4.1800e-003		563.0268
Worker	0.2351	0.2759	2.9943	7.7000e-003	0.6079	4.4200e-003	0.6123	0.1612	4.0800e-003	0.1653		617.9129	617.9129	0.0298		618.5386
Total	**0.4646**	**2.3099**	**5.5003**	**0.0134**	**0.7672**	**0.0343**	**0.8015**	**0.2067**	**0.0315**	**0.2382**		**1,180.8518**	**1,180.8518**	**0.0340**		**1,181.5653**

3.3 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0898**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**		**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

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	0.0524	0.0615	0.6711	1.5600e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		130.2798	130.2798	6.5300e-003		130.4169
Total	**0.0524**	**0.0615**	**0.6711**	**1.5600e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**130.2798**	**130.2798**	**6.5300e-003**		**130.4169**

3.3 Paving - 2016

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

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	0.0524	0.0615	0.6711	1.5600e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		130.2798	130.2798	6.5300e-003		130.4169
Total	**0.0524**	**0.0615**	**0.6711**	**1.5600e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**130.2798**	**130.2798**	**6.5300e-003**		**130.4169**

3.3 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

3.3 Paving - 2017

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

3.4 Architectural Coating - 2017

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	24.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**25.0755**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

3.4 Architectural Coating - 2017

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	24.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**24.7729**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 1 - N 1 & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 3 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 3 construction crews.

Off-road Equipment -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	ReapplicationRatePercent	10	0

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	75.00	181.00
tblConstructionPhase	NumDays	1,110.00	246.00
tblConstructionPhase	NumDays	75.00	246.00
tblConstructionPhase	PhaseEndDate	6/21/2018	10/11/2017
tblConstructionPhase	PhaseEndDate	9/20/2018	10/11/2017
tblConstructionPhase	PhaseStartDate	10/12/2017	2/1/2017
tblConstructionPhase	PhaseStartDate	10/12/2017	11/2/2016
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	84.70	0.00
tblFireplaces	NumberWood	53.90	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.09	0.00
tblSolidWaste	SolidWasteGenerationRate	180.40	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	10,033,719.95	0.00
tblWater	OutdoorWaterUseRate	1,191,481.35	0.00
tblWater	OutdoorWaterUseRate	6,325,606.05	0.00
tblWoodstoves	NumberCatalytic	7.70	0.00
tblWoodstoves	NumberNoncatalytic	7.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.9279	110.6442	77.7988	0.1171	0.8904	7.2034	8.0938	0.2394	6.7425	6.9818	0.0000	11,618.4056	11,618.4056	2.7281	0.0000	11,675.6948
2017	36.9038	104.2156	78.4539	0.1215	1.0136	6.6918	7.7054	0.2721	6.2731	6.5451	0.0000	11,856.0462	11,856.0462	2.7239	0.0000	11,913.2480
Total	**49.8316**	**214.8599**	**156.2527**	**0.2386**	**1.9041**	**13.8951**	**15.7992**	**0.5114**	**13.0155**	**13.5270**	**0.0000**	**23,474.4518**	**23,474.4518**	**5.4520**	**0.0000**	**23,588.9427**

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					
2016	1.8734	9.4341	76.6219	0.1171	0.8904	0.1195	1.0099	0.2394	0.1162	0.3556	0.0000	11,618.4056	11,618.4056	2.7281	0.0000	11,675.6948
2017	26.6407	9.3214	78.4645	0.1215	1.0136	0.1176	1.1312	0.2721	0.1147	0.3867	0.0000	11,856.0462	11,856.0462	2.7239	0.0000	11,913.2480
Total	**28.5140**	**18.7555**	**155.0864**	**0.2386**	**1.9041**	**0.2370**	**2.1411**	**0.5114**	**0.2309**	**0.7423**	**0.0000**	**23,474.4517**	**23,474.4517**	**5.4520**	**0.0000**	**23,588.9427**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**42.78**	**91.27**	**0.75**	**0.00**	**0.00**	**98.29**	**86.45**	**0.00**	**98.23**	**94.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/2/2016	10/11/2017	5	246	
2	Paving	Paving	11/2/2016	10/11/2017	5	246	
3	Architectural Coating	Architectural Coating	2/1/2017	10/11/2017	5	181	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 561,330; Residential Outdoor: 187,110; Non-Residential Indoor: 65,340; Non-Residential Outdoor: 21,780 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	3	7.00	226	0.29
Building Construction	Forklifts	9	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	9	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	27	74.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2016

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	10.2187	85.5190	55.5199	0.0804		5.9022	5.9022		5.5454	5.5454		8,007.8592	8,007.8592	1.9861		8,049.5671
Total	**10.2187**	**85.5190**	**55.5199**	**0.0804**		**5.9022**	**5.9022**		**5.5454**	**5.5454**		**8,007.8592**	**8,007.8592**	**1.9861**		**8,049.5671**

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	0.2896	2.3297	3.5931	5.6800e-003	0.1593	0.0348	0.1941	0.0455	0.0320	0.0774		568.2221	568.2221	4.5400e-003		568.3174
Worker	0.2742	0.3406	3.2162	7.2300e-003	0.6079	4.5600e-003	0.6125	0.1612	4.1900e-003	0.1654		603.5969	603.5969	0.0322		604.2731
Total	**0.5638**	**2.6703**	**6.8093**	**0.0129**	**0.7672**	**0.0393**	**0.8065**	**0.2067**	**0.0362**	**0.2428**		**1,171.8190**	**1,171.8190**	**0.0367**		**1,172.5905**

3.2 Building Construction - 2016

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	8,007.8592	8,007.8592	1.9861		8,049.5670
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**8,007.8592**	**8,007.8592**	**1.9861**		**8,049.5670**

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	0.2896	2.3297	3.5931	5.6800e-003	0.1593	0.0348	0.1941	0.0455	0.0320	0.0774		568.2221	568.2221	4.5400e-003		568.3174
Worker	0.2742	0.3406	3.2162	7.2300e-003	0.6079	4.5600e-003	0.6125	0.1612	4.1900e-003	0.1654		603.5969	603.5969	0.0322		604.2731
Total	**0.5638**	**2.6703**	**6.8093**	**0.0129**	**0.7672**	**0.0393**	**0.8065**	**0.2067**	**0.0362**	**0.2428**		**1,171.8190**	**1,171.8190**	**0.0367**		**1,172.5905**

3.2 Building Construction - 2017

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	9.3071	79.2170	54.3874	0.0804		5.3437	5.3437		5.0189	5.0189		7,919.4160	7,919.4160	1.9491		7,960.3471
Total	**9.3071**	**79.2170**	**54.3874**	**0.0804**		**5.3437**	**5.3437**		**5.0189**	**5.0189**		**7,919.4160**	**7,919.4160**	**1.9491**		**7,960.3471**

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	0.2647	2.0822	3.4032	5.6700e-003	0.1593	0.0302	0.1895	0.0455	0.0277	0.0732		558.6093	558.6093	4.3000e-003		558.6995
Worker	0.2484	0.3096	2.8947	7.2300e-003	0.6079	4.4200e-003	0.6123	0.1612	4.0800e-003	0.1653		580.2696	580.2696	0.0298		580.8953
Total	**0.5131**	**2.3917**	**6.2979**	**0.0129**	**0.7672**	**0.0346**	**0.8018**	**0.2067**	**0.0318**	**0.2385**		**1,138.8789**	**1,138.8789**	**0.0341**		**1,139.5948**

3.2 Building Construction - 2017

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,919.4160	7,919.4160	1.9491		7,960.3471
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,919.4160**	**7,919.4160**	**1.9491**		**7,960.3471**

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	0.2647	2.0822	3.4032	5.6700e-003	0.1593	0.0302	0.1895	0.0455	0.0277	0.0732		558.6093	558.6093	4.3000e-003		558.6995
Worker	0.2484	0.3096	2.8947	7.2300e-003	0.6079	4.4200e-003	0.6123	0.1612	4.0800e-003	0.1653		580.2696	580.2696	0.0298		580.8953
Total	**0.5131**	**2.3917**	**6.2979**	**0.0129**	**0.7672**	**0.0346**	**0.8018**	**0.2067**	**0.0318**	**0.2385**		**1,138.8789**	**1,138.8789**	**0.0341**		**1,139.5948**

3.3 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0898**	**22.3859**	**14.8176**	**0.0223**		**1.2610**	**1.2610**		**1.1601**	**1.1601**		**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

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	0.0556	0.0690	0.6519	1.4700e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		122.3507	122.3507	6.5300e-003		122.4878
Total	**0.0556**	**0.0690**	**0.6519**	**1.4700e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**122.3507**	**122.3507**	**6.5300e-003**		**122.4878**

3.3 Paving - 2016

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,316.3767**	**2,316.3767**	**0.6987**		**2,331.0495**

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	0.0556	0.0690	0.6519	1.4700e-003	0.1232	9.2000e-004	0.1242	0.0327	8.5000e-004	0.0335		122.3507	122.3507	6.5300e-003		122.4878
Total	**0.0556**	**0.0690**	**0.6519**	**1.4700e-003**	**0.1232**	**9.2000e-004**	**0.1242**	**0.0327**	**8.5000e-004**	**0.0335**		**122.3507**	**122.3507**	**6.5300e-003**		**122.4878**

3.3 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

3.3 Paving - 2017

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

3.4 Architectural Coating - 2017

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	24.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**25.0755**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

3.4 Architectural Coating - 2017

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	24.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**24.7729**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133
Unmitigated	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751	0.0000	24.5114	24.5114	0.0239	0.0000	25.0133

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4159	0.1580	13.6581	7.2000e-004		0.0751	0.0751		0.0751	0.0751		24.5114	24.5114	0.0239		25.0133
Total	**0.4159**	**0.1580**	**13.6581**	**7.2000e-004**		**0.0751**	**0.0751**		**0.0751**	**0.0751**	**0.0000**	**24.5114**	**24.5114**	**0.0239**	**0.0000**	**25.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 1 - N 1 & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.01	0.92	0.01	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.85	0.90	0.04	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.84	0.95	-0.14	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 2	15.00
Cranes	Diesel	Tier 4 Final	3	3	Level 2	15.00
Forklifts	Diesel	Tier 4 Final	9	9	Level 2	15.00
Generator Sets	Diesel	Tier 4 Final	3	3	Level 2	15.00
Pavers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Paving Equipment	Diesel	Tier 4 Final	2	2	Level 2	15.00
Rollers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	9	9	Level 2	15.00
Welders	Diesel	Tier 4 Final	3	3	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	3.00700E-002	1.97740E-001	1.69060E-001	2.70000E-004	1.56900E-002	1.56900E-002	0.00000E+000	2.31070E+001	2.31070E+001	2.44000E-003	0.00000E+000	2.31582E+001
Cranes	2.13280E-001	2.53120E+000	9.02850E-001	1.82000E-003	1.13230E-001	1.04170E-001	0.00000E+000	1.69538E+002	1.69538E+002	5.18000E-002	0.00000E+000	1.70626E+002
Forklifts	2.36610E-001	2.04638E+000	1.38545E+000	1.69000E-003	1.69250E-001	1.55710E-001	0.00000E+000	1.57352E+002	1.57352E+002	4.80800E-002	0.00000E+000	1.58362E+002
Generator Sets	2.14820E-001	1.67119E+000	1.39434E+000	2.43000E-003	1.13320E-001	1.13320E-001	0.00000E+000	2.08562E+002	2.08562E+002	1.72700E-002	0.00000E+000	2.08924E+002
Pavers	9.03500E-002	1.01230E+000	6.98350E-001	1.11000E-003	4.99100E-002	4.59200E-002	0.00000E+000	1.03380E+002	1.03380E+002	3.15900E-002	0.00000E+000	1.04043E+002
Paving Equipment	7.05800E-002	8.06250E-001	6.24300E-001	9.90000E-004	4.02200E-002	3.70100E-002	0.00000E+000	9.18241E+001	9.18241E+001	2.80600E-002	0.00000E+000	9.24133E+001
Rollers	7.76000E-002	7.22830E-001	4.90720E-001	6.40000E-004	5.25300E-002	4.83300E-002	0.00000E+000	6.00137E+001	6.00137E+001	1.83400E-002	0.00000E+000	6.03988E+001
Tractors/Loaders/ Backhoes	3.10880E-001	2.98412E+000	2.32192E+000	3.01000E-003	2.25410E-001	2.07380E-001	0.00000E+000	2.80498E+002	2.80498E+002	8.57100E-002	0.00000E+000	2.82298E+002
Welders	1.88790E-001	6.46280E-001	7.09450E-001	9.40000E-004	4.80700E-002	4.80700E-002	0.00000E+000	6.94534E+001	6.94534E+001	1.53500E-002	0.00000E+000	6.97758E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	2.69000E-003	9.91000E-003	1.65830E-001	2.70000E-004	1.80000E-004	1.80000E-004	0.00000E+000	2.31069E+001	2.31069E+001	2.44000E-003	0.00000E+000	2.31582E+001
Cranes	2.23900E-002	8.24800E-002	8.21080E-001	1.82000E-003	1.49000E-003	1.49000E-003	0.00000E+000	1.69538E+002	1.69538E+002	5.18000E-002	0.00000E+000	1.70626E+002
Forklifts	2.08500E-002	7.68000E-002	1.28586E+000	1.69000E-003	1.39000E-003	1.39000E-003	0.00000E+000	1.57352E+002	1.57352E+002	4.80800E-002	0.00000E+000	1.58362E+002
Generator Sets	2.42700E-002	8.94000E-002	1.49680E+000	2.43000E-003	1.62000E-003	1.62000E-003	0.00000E+000	2.08561E+002	2.08561E+002	1.72700E-002	0.00000E+000	2.08924E+002
Pavers	1.36700E-002	5.03400E-002	8.42790E-001	1.11000E-003	9.10000E-004	9.10000E-004	0.00000E+000	1.03380E+002	1.03380E+002	3.15900E-002	0.00000E+000	1.04043E+002
Paving Equipment	1.21800E-002	4.48700E-002	7.51290E-001	9.90000E-004	8.10000E-004	8.10000E-004	0.00000E+000	9.18240E+001	9.18240E+001	2.80600E-002	0.00000E+000	9.24132E+001
Rollers	7.91000E-003	2.91500E-002	4.88020E-001	6.40000E-004	5.30000E-004	5.30000E-004	0.00000E+000	6.00137E+001	6.00137E+001	1.83400E-002	0.00000E+000	6.03988E+001
Tractors/Loaders/Backhoes	3.67900E-002	1.35500E-001	2.26858E+000	3.01000E-003	2.45000E-003	2.45000E-003	0.00000E+000	2.80497E+002	2.80497E+002	8.57100E-002	0.00000E+000	2.82297E+002
Welders	1.61700E-002	3.14900E-001	5.52340E-001	9.40000E-004	5.40000E-004	5.40000E-004	0.00000E+000	6.94533E+001	6.94533E+001	1.53500E-002	0.00000E+000	6.97757E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	9.10542E-001	9.49884E-001	1.91056E-002	0.00000E+000	9.88528E-001	9.88528E-001	0.00000E+000	1.29831E-006	1.29831E-006	0.00000E+000	0.00000E+000	1.29544E-006
Cranes	8.95021E-001	9.67415E-001	9.05688E-002	0.00000E+000	9.86841E-001	9.85696E-001	0.00000E+000	1.23866E-006	1.23866E-006	0.00000E+000	0.00000E+000	1.17216E-006
Forklifts	9.11880E-001	9.62470E-001	7.18828E-002	0.00000E+000	9.91787E-001	9.91073E-001	0.00000E+000	1.20748E-006	1.20748E-006	0.00000E+000	0.00000E+000	1.19978E-006
Generator Sets	8.87022E-001	9.46505E-001	-7.34828E-002	0.00000E+000	9.85704E-001	9.85704E-001	0.00000E+000	1.19869E-006	1.19869E-006	0.00000E+000	0.00000E+000	1.19661E-006
Pavers	8.48700E-001	9.50272E-001	-2.06830E-001	0.00000E+000	9.81767E-001	9.80183E-001	0.00000E+000	1.16077E-006	1.16077E-006	0.00000E+000	0.00000E+000	1.15336E-006
Paving Equipment	8.27430E-001	9.44347E-001	-2.03412E-001	0.00000E+000	9.79861E-001	9.78114E-001	0.00000E+000	1.19794E-006	1.19794E-006	0.00000E+000	0.00000E+000	1.19031E-006
Rollers	8.98067E-001	9.59672E-001	5.50212E-003	0.00000E+000	9.89911E-001	9.89034E-001	0.00000E+000	1.33303E-006	1.33303E-006	0.00000E+000	0.00000E+000	1.15896E-006
Tractors/Loaders/Backhoes	8.81659E-001	9.54593E-001	2.29724E-002	0.00000E+000	9.89131E-001	9.88186E-001	0.00000E+000	1.17648E-006	1.17648E-006	0.00000E+000	0.00000E+000	1.16898E-006
Welders	9.14349E-001	5.12750E-001	2.21453E-001	0.00000E+000	9.88766E-001	9.88766E-001	0.00000E+000	1.15185E-006	1.15185E-006	0.00000E+000	0.00000E+000	1.28985E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.09	0.02	0.09	0.02	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

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

Water Mitigation Measures

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

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

Valiano - Vertical Development (Phase 2 - N 2)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	58.00	Dwelling Unit	18.83	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 4 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 4 construction crews.

Off-road Equipment -

Trips and VMT -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00

tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	NumDays	300.00	75.00
tblConstructionPhase	NumDays	20.00	75.00
tblConstructionPhase	PhaseEndDate	3/9/2018	1/24/2018
tblConstructionPhase	PhaseEndDate	5/9/2018	1/24/2018
tblConstructionPhase	PhaseStartDate	1/25/2018	12/12/2017
tblConstructionPhase	PhaseStartDate	1/25/2018	10/12/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	19.25	0.00
tblFireplaces	NumberWood	12.25	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	12.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	12.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	41.00	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	2,280,390.90	0.00
tblWater	OutdoorWaterUseRate	1,437,637.74	0.00
tblWoodstoves	NumberCatalytic	1.75	0.00
tblWoodstoves	NumberNoncatalytic	1.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	39.4238	128.5586	90.7837	0.1367	0.2812	8.4434	8.7246	0.0751	7.9188	7.9940	0.0000	13,474.4067	13,474.4067	3.3406	0.0000	13,544.5594
2018	37.3485	112.6236	88.0159	0.1367	0.2812	7.0727	7.3539	0.0751	6.6392	6.7143	0.0000	13,307.8317	13,307.8317	3.2928	0.0000	13,376.9812
Total	**76.7723**	**241.1822**	**178.7996**	**0.2734**	**0.5624**	**15.5162**	**16.0786**	**0.1502**	**14.5580**	**14.7082**	**0.0000**	**26,782.2384**	**26,782.2384**	**6.6334**	**0.0000**	**26,921.5406**

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					
2017	26.3848	9.1533	90.0761	0.1367	0.2812	0.1083	0.3895	0.0751	0.1078	0.1829	0.0000	13,474.4067	13,474.4067	3.3406	0.0000	13,544.5594
2018	26.3739	9.1104	89.9407	0.1367	0.2812	0.1079	0.3891	0.0751	0.1074	0.1826	0.0000	13,307.8317	13,307.8317	3.2928	0.0000	13,376.9812
Total	**52.7587**	**18.2638**	**180.0169**	**0.2734**	**0.5624**	**0.2163**	**0.7787**	**0.1502**	**0.2152**	**0.3655**	**0.0000**	**26,782.2384**	**26,782.2384**	**6.6334**	**0.0000**	**26,921.5406**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**31.28**	**92.43**	**-0.68**	**0.00**	**0.00**	**98.61**	**95.16**	**0.00**	**98.52**	**97.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/12/2017	1/24/2018	5	75	
2	Paving	Paving	10/12/2017	1/24/2018	5	75	
3	Architectural Coating	Architectural Coating	12/12/2017	1/24/2018	5	32	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 127,575; Residential Outdoor: 42,525; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	12	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	12	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	36	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2017

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	12.4095	105.6226	72.5166	0.1072		7.1249	7.1249		6.6919	6.6919		10,559.2213	10,559.2213	2.5988		10,613.7961
Total	**12.4095**	**105.6226**	**72.5166**	**0.1072**		**7.1249**	**7.1249**		**6.6919**	**6.6919**		**10,559.2213**	**10,559.2213**	**2.5988**		**10,613.7961**

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	0.0383	0.3390	0.4177	9.5000e-004	0.0266	4.9800e-003	0.0315	7.5800e-003	4.5800e-003	0.0122		93.8232	93.8232	7.0000e-004		93.8378
Worker	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622
Total	**0.0796**	**0.3875**	**0.9437**	**2.3000e-003**	**0.1333**	**5.7600e-003**	**0.1391**	**0.0359**	**5.3000e-003**	**0.0412**		**202.3754**	**202.3754**	**5.9300e-003**		**202.5000**

3.2 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3059	7.5782	69.6441	0.1072		0.0812	0.0812		0.0812	0.0812	0.0000	10,559.2213	10,559.2213	2.5988		10,613.7961
Total	**1.3059**	**7.5782**	**69.6441**	**0.1072**		**0.0812**	**0.0812**		**0.0812**	**0.0812**	**0.0000**	**10,559.2213**	**10,559.2213**	**2.5988**		**10,613.7961**

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	0.0383	0.3390	0.4177	9.5000e-004	0.0266	4.9800e-003	0.0315	7.5800e-003	4.5800e-003	0.0122		93.8232	93.8232	7.0000e-004		93.8378
Worker	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622
Total	**0.0796**	**0.3875**	**0.9437**	**2.3000e-003**	**0.1333**	**5.7600e-003**	**0.1391**	**0.0359**	**5.3000e-003**	**0.0412**		**202.3754**	**202.3754**	**5.9300e-003**		**202.5000**

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	10.6747	93.0434	70.1306	0.1072		5.9771	5.9771		5.6191	5.6191		10,439.7558	10,439.7558	2.5548		10,493.4068
Total	**10.6747**	**93.0434**	**70.1306**	**0.1072**		**5.9771**	**5.9771**		**5.6191**	**5.6191**		**10,439.7558**	**10,439.7558**	**2.5548**		**10,493.4068**

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	0.0360	0.3062	0.3980	9.5000e-004	0.0266	4.6200e-003	0.0312	7.5700e-003	4.2500e-003	0.0118		92.2121	92.2121	6.8000e-004		92.2264
Worker	0.0377	0.0442	0.4775	1.3500e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		104.4805	104.4805	4.8700e-003		104.5828
Total	**0.0737**	**0.3504**	**0.8755**	**2.3000e-003**	**0.1333**	**5.3800e-003**	**0.1387**	**0.0359**	**4.9500e-003**	**0.0409**		**196.6926**	**196.6926**	**5.5500e-003**		**196.8092**

3.2 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3059	7.5782	69.6441	0.1072		0.0812	0.0812		0.0812	0.0812	0.0000	10,439.7558	10,439.7558	2.5548		10,493.4068
Total	**1.3059**	**7.5782**	**69.6441**	**0.1072**		**0.0812**	**0.0812**		**0.0812**	**0.0812**	**0.0000**	**10,439.7558**	**10,439.7558**	**2.5548**		**10,493.4068**

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	0.0360	0.3062	0.3980	9.5000e-004	0.0266	4.6200e-003	0.0312	7.5700e-003	4.2500e-003	0.0118		92.2121	92.2121	6.8000e-004		92.2264
Worker	0.0377	0.0442	0.4775	1.3500e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		104.4805	104.4805	4.8700e-003		104.5828
Total	**0.0737**	**0.3504**	**0.8755**	**2.3000e-003**	**0.1333**	**5.3800e-003**	**0.1387**	**0.0359**	**4.9500e-003**	**0.0409**		**196.6926**	**196.6926**	**5.5500e-003**		**196.8092**

3.3 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

3.3 Paving - 2017

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0477	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
Total	**0.0477**	**0.0559**	**0.6070**	**1.5600e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**125.2526**	**125.2526**	**6.0400e-003**		**125.3794**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.4 Architectural Coating - 2017

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**24.9702**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	9.5300e-003	0.0112	0.1214	3.1000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7000e-003		25.0505	25.0505	1.2100e-003		25.0759
Total	**9.5300e-003**	**0.0112**	**0.1214**	**3.1000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.7000e-004**	**6.7000e-003**		**25.0505**	**25.0505**	**1.2100e-003**		**25.0759**

3.4 Architectural Coating - 2017

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**24.6676**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	9.5300e-003	0.0112	0.1214	3.1000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7000e-003		25.0505	25.0505	1.2100e-003		25.0759
Total	**9.5300e-003**	**0.0112**	**0.1214**	**3.1000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.7000e-004**	**6.7000e-003**		**25.0505**	**25.0505**	**1.2100e-003**		**25.0759**

3.4 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**24.9366**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	8.6900e-003	0.0102	0.1102	3.1000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		24.1109	24.1109	1.1200e-003		24.1345
Total	**8.6900e-003**	**0.0102**	**0.1102**	**3.1000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**24.1109**	**24.1109**	**1.1200e-003**		**24.1345**

3.4 Architectural Coating - 2018

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**24.6676**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	8.6900e-003	0.0102	0.1102	3.1000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		24.1109	24.1109	1.1200e-003		24.1345
Total	**8.6900e-003**	**0.0102**	**0.1102**	**3.1000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**24.1109**	**24.1109**	**1.1200e-003**		**24.1345**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Unmitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925

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					
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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					
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 2 - N 2)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	58.00	Dwelling Unit	18.83	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 4 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 4 construction crews.

Off-road Equipment -

Trips and VMT -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00

tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	NumDays	300.00	75.00
tblConstructionPhase	NumDays	20.00	75.00
tblConstructionPhase	PhaseEndDate	3/9/2018	1/24/2018
tblConstructionPhase	PhaseEndDate	5/9/2018	1/24/2018
tblConstructionPhase	PhaseStartDate	1/25/2018	12/12/2017
tblConstructionPhase	PhaseStartDate	1/25/2018	10/12/2017
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	19.25	0.00
tblFireplaces	NumberWood	12.25	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	12.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	12.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	41.00	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	2,280,390.90	0.00
tblWater	OutdoorWaterUseRate	1,437,637.74	0.00
tblWoodstoves	NumberCatalytic	1.75	0.00
tblWoodstoves	NumberNoncatalytic	1.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	39.4352	128.5808	90.8915	0.1365	0.2812	8.4435	8.7247	0.0751	7.9189	7.9940	0.0000	13,457.9156	13,457.9156	3.3406	0.0000	13,528.0687
2018	37.3586	112.6435	88.1175	0.1365	0.2812	7.0728	7.3540	0.0751	6.6392	6.7143	0.0000	13,291.9307	13,291.9307	3.2929	0.0000	13,361.0805
Total	**76.7939**	**241.2243**	**179.0090**	**0.2730**	**0.5624**	**15.5163**	**16.0787**	**0.1502**	**14.5581**	**14.7083**	**0.0000**	**26,749.8463**	**26,749.8463**	**6.6335**	**0.0000**	**26,889.1492**

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					
2017	26.3962	9.1755	90.1839	0.1365	0.2812	0.1084	0.3896	0.0751	0.1078	0.1830	0.0000	13,457.9156	13,457.9156	3.3406	0.0000	13,528.0687
2018	26.3840	9.1304	90.0423	0.1365	0.2812	0.1080	0.3892	0.0751	0.1075	0.1826	0.0000	13,291.9307	13,291.9307	3.2929	0.0000	13,361.0805
Total	**52.7802**	**18.3059**	**180.2262**	**0.2730**	**0.5624**	**0.2164**	**0.7788**	**0.1502**	**0.2153**	**0.3656**	**0.0000**	**26,749.8462**	**26,749.8462**	**6.6335**	**0.0000**	**26,889.1492**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**31.27**	**92.41**	**-0.68**	**0.00**	**0.00**	**98.61**	**95.16**	**0.00**	**98.52**	**97.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/12/2017	1/24/2018	5	75	
2	Paving	Paving	10/12/2017	1/24/2018	5	75	
3	Architectural Coating	Architectural Coating	12/12/2017	1/24/2018	5	32	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 127,575; Residential Outdoor: 42,525; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	4	7.00	226	0.29
Building Construction	Forklifts	12	8.00	89	0.20
Building Construction	Generator Sets	4	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	12	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	36	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2017

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	12.4095	105.6226	72.5166	0.1072		7.1249	7.1249		6.6919	6.6919		10,559.2213	10,559.2213	2.5988		10,613.7961
Total	**12.4095**	**105.6226**	**72.5166**	**0.1072**		**7.1249**	**7.1249**		**6.6919**	**6.6919**		**10,559.2213**	**10,559.2213**	**2.5988**		**10,613.7961**

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	0.0441	0.3470	0.5672	9.5000e-004	0.0266	5.0300e-003	0.0316	7.5800e-003	4.6200e-003	0.0122		93.1016	93.1016	7.2000e-004		93.1166
Worker	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492
Total	**0.0878**	**0.4014**	**1.0757**	**2.2200e-003**	**0.1333**	**5.8100e-003**	**0.1392**	**0.0359**	**5.3400e-003**	**0.0412**		**195.0408**	**195.0408**	**5.9500e-003**		**195.1658**

3.2 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3059	7.5782	69.6441	0.1072		0.0812	0.0812		0.0812	0.0812	0.0000	10,559.2213	10,559.2213	2.5988		10,613.7961
Total	**1.3059**	**7.5782**	**69.6441**	**0.1072**		**0.0812**	**0.0812**		**0.0812**	**0.0812**	**0.0000**	**10,559.2213**	**10,559.2213**	**2.5988**		**10,613.7961**

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	0.0441	0.3470	0.5672	9.5000e-004	0.0266	5.0300e-003	0.0316	7.5800e-003	4.6200e-003	0.0122		93.1016	93.1016	7.2000e-004		93.1166
Worker	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492
Total	**0.0878**	**0.4014**	**1.0757**	**2.2200e-003**	**0.1333**	**5.8100e-003**	**0.1392**	**0.0359**	**5.3400e-003**	**0.0412**		**195.0408**	**195.0408**	**5.9500e-003**		**195.1658**

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	10.6747	93.0434	70.1306	0.1072		5.9771	5.9771		5.6191	5.6191		10,439.7558	10,439.7558	2.5548		10,493.4068
Total	**10.6747**	**93.0434**	**70.1306**	**0.1072**		**5.9771**	**5.9771**		**5.6191**	**5.6191**		**10,439.7558**	**10,439.7558**	**2.5548**		**10,493.4068**

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	0.0414	0.3133	0.5431	9.4000e-004	0.0266	4.6700e-003	0.0312	7.5700e-003	4.2900e-003	0.0119		91.5011	91.5011	7.0000e-004		91.5159
Worker	0.0397	0.0496	0.4593	1.2700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		98.1105	98.1105	4.8700e-003		98.2127
Total	**0.0810**	**0.3629**	**1.0023**	**2.2100e-003**	**0.1333**	**5.4300e-003**	**0.1388**	**0.0359**	**4.9900e-003**	**0.0409**		**189.6116**	**189.6116**	**5.5700e-003**		**189.7286**

3.2 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3059	7.5782	69.6441	0.1072		0.0812	0.0812		0.0812	0.0812	0.0000	10,439.7558	10,439.7558	2.5548		10,493.4068
Total	**1.3059**	**7.5782**	**69.6441**	**0.1072**		**0.0812**	**0.0812**		**0.0812**	**0.0812**	**0.0000**	**10,439.7558**	**10,439.7558**	**2.5548**		**10,493.4068**

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	0.0414	0.3133	0.5431	9.4000e-004	0.0266	4.6700e-003	0.0312	7.5700e-003	4.2900e-003	0.0119		91.5011	91.5011	7.0000e-004		91.5159
Worker	0.0397	0.0496	0.4593	1.2700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		98.1105	98.1105	4.8700e-003		98.2127
Total	**0.0810**	**0.3629**	**1.0023**	**2.2100e-003**	**0.1333**	**5.4300e-003**	**0.1388**	**0.0359**	**4.9900e-003**	**0.0409**		**189.6116**	**189.6116**	**5.5700e-003**		**189.7286**

3.3 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9074**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

3.3 Paving - 2017

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
Total	**0.0504**	**0.0628**	**0.5868**	**1.4700e-003**	**0.1232**	**9.0000e-004**	**0.1241**	**0.0327**	**8.3000e-004**	**0.0335**		**117.6222**	**117.6222**	**6.0400e-003**		**117.7491**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.4 Architectural Coating - 2017

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**24.9702**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0101	0.0126	0.1174	2.9000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7000e-003		23.5244	23.5244	1.2100e-003		23.5498
Total	**0.0101**	**0.0126**	**0.1174**	**2.9000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.7000e-004**	**6.7000e-003**		**23.5244**	**23.5244**	**1.2100e-003**		**23.5498**

3.4 Architectural Coating - 2017

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**24.6676**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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	0.0101	0.0126	0.1174	2.9000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7000e-003		23.5244	23.5244	1.2100e-003		23.5498
Total	**0.0101**	**0.0126**	**0.1174**	**2.9000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.7000e-004**	**6.7000e-003**		**23.5244**	**23.5244**	**1.2100e-003**		**23.5498**

3.4 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**24.9366**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	9.1500e-003	0.0115	0.1060	2.9000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		22.6409	22.6409	1.1200e-003		22.6645
Total	**9.1500e-003**	**0.0115**	**0.1060**	**2.9000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**22.6409**	**22.6409**	**1.1200e-003**		**22.6645**

3.4 Architectural Coating - 2018

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	24.6379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**24.6676**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	9.1500e-003	0.0115	0.1060	2.9000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		22.6409	22.6409	1.1200e-003		22.6645
Total	**9.1500e-003**	**0.0115**	**0.1060**	**2.9000e-004**	**0.0246**	**1.8000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**22.6409**	**22.6409**	**1.1200e-003**		**22.6645**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925
Unmitigated	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264	0.0000	8.6160	8.6160	8.4000e-003	0.0000	8.7925

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

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					
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1462	0.0555	4.8010	2.5000e-004		0.0264	0.0264		0.0264	0.0264		8.6160	8.6160	8.4000e-003		8.7925
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1462**	**0.0555**	**4.8010**	**2.5000e-004**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**8.6160**	**8.6160**	**8.4000e-003**	**0.0000**	**8.7925**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 2 - N 2)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.01	0.94	0.01	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.89	0.92	0.03	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.83	0.95	-0.15	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 2	15.00
Cranes	Diesel	Tier 4 Final	4	4	Level 2	15.00
Forklifts	Diesel	Tier 4 Final	12	12	Level 2	15.00
Generator Sets	Diesel	Tier 4 Final	4	4	Level 2	15.00
Pavers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Paving Equipment	Diesel	Tier 4 Final	2	2	Level 2	15.00
Rollers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	12	12	Level 2	15.00
Welders	Diesel	Tier 4 Final	4	4	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.01000E-003	3.33500E-002	2.97600E-002	5.00000E-005	2.57000E-003	2.57000E-003	0.00000E+000	4.08521E+000	4.08521E+000	4.10000E-004	0.00000E+000	4.09376E+000
Cranes	8.22300E-002	9.77580E-001	3.52660E-001	7.40000E-004	4.33100E-002	3.98400E-002	0.00000E+000	6.84675E+001	6.84675E+001	2.10600E-002	0.00000E+000	6.89097E+001
Forklifts	9.13800E-002	7.94680E-001	5.58010E-001	6.90000E-004	6.51000E-002	5.99000E-002	0.00000E+000	6.35467E+001	6.35467E+001	1.95400E-002	0.00000E+000	6.39571E+001
Generator Sets	8.31800E-002	6.57000E-001	5.65080E-001	9.90000E-004	4.36800E-002	4.36800E-002	0.00000E+000	8.47811E+001	8.47811E+001	6.68000E-003	0.00000E+000	8.49215E+001
Pavers	2.61700E-002	2.92210E-001	2.12300E-001	3.40000E-004	1.43600E-002	1.32100E-002	0.00000E+000	3.13193E+001	3.13193E+001	9.63000E-003	0.00000E+000	3.15216E+001
Paving Equipment	2.03300E-002	2.30440E-001	1.89550E-001	3.00000E-004	1.14600E-002	1.05500E-002	0.00000E+000	2.78127E+001	2.78127E+001	8.55000E-003	0.00000E+000	2.79924E+001
Rollers	2.23600E-002	2.10260E-001	1.48320E-001	2.00000E-004	1.50700E-002	1.38600E-002	0.00000E+000	1.81760E+001	1.81760E+001	5.59000E-003	0.00000E+000	1.82934E+001
Tractors/Loaders/ Backhoes	1.19950E-001	1.15939E+000	9.37180E-001	1.22000E-003	8.61100E-002	7.92200E-002	0.00000E+000	1.13215E+002	1.13215E+002	3.48200E-002	0.00000E+000	1.13946E+002
Welders	7.30100E-002	2.58990E-001	2.84970E-001	3.80000E-004	1.86500E-002	1.86500E-002	0.00000E+000	2.82331E+001	2.82331E+001	5.94000E-003	0.00000E+000	2.83579E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	4.80000E-004	1.75000E-003	2.93200E-002	5.00000E-005	3.00000E-005	3.00000E-005	0.00000E+000	4.08521E+000	4.08521E+000	4.10000E-004	0.00000E+000	4.09375E+000
Cranes	9.10000E-003	3.35300E-002	3.33770E-001	7.40000E-004	6.10000E-004	6.10000E-004	0.00000E+000	6.84674E+001	6.84674E+001	2.10600E-002	0.00000E+000	6.89096E+001
Forklifts	8.48000E-003	3.12200E-002	5.22710E-001	6.90000E-004	5.70000E-004	5.70000E-004	0.00000E+000	6.35466E+001	6.35466E+001	1.95400E-002	0.00000E+000	6.39570E+001
Generator Sets	9.87000E-003	3.63400E-002	6.08450E-001	9.90000E-004	6.60000E-004	6.60000E-004	0.00000E+000	8.47810E+001	8.47810E+001	6.68000E-003	0.00000E+000	8.49214E+001
Pavers	4.17000E-003	1.53500E-002	2.56950E-001	3.40000E-004	2.80000E-004	2.80000E-004	0.00000E+000	3.13193E+001	3.13193E+001	9.63000E-003	0.00000E+000	3.15216E+001
Paving Equipment	3.71000E-003	1.36800E-002	2.29050E-001	3.00000E-004	2.50000E-004	2.50000E-004	0.00000E+000	2.78127E+001	2.78127E+001	8.55000E-003	0.00000E+000	2.79923E+001
Rollers	2.41000E-003	8.89000E-003	1.48790E-001	2.00000E-004	1.60000E-004	1.60000E-004	0.00000E+000	1.81760E+001	1.81760E+001	5.59000E-003	0.00000E+000	1.82934E+001
Tractors/Loaders/Backhoes	1.49500E-002	5.50800E-002	9.22190E-001	1.22000E-003	1.00000E-003	1.00000E-003	0.00000E+000	1.13215E+002	1.13215E+002	3.48200E-002	0.00000E+000	1.13946E+002
Welders	6.57000E-003	1.28010E-001	2.24530E-001	3.80000E-004	2.20000E-004	2.20000E-004	0.00000E+000	2.82331E+001	2.82331E+001	5.94000E-003	0.00000E+000	2.83579E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	9.04192E-001	9.47526E-001	1.47849E-002	0.00000E+000	9.88327E-001	9.88327E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.44274E-006
Cranes	8.89335E-001	9.65701E-001	5.35643E-002	0.00000E+000	9.85915E-001	9.84689E-001	0.00000E+000	1.16844E-006	1.16844E-006	0.00000E+000	0.00000E+000	1.30606E-006
Forklifts	9.07201E-001	9.60714E-001	6.32605E-002	0.00000E+000	9.91244E-001	9.90484E-001	0.00000E+000	1.25892E-006	1.25892E-006	0.00000E+000	0.00000E+000	1.25084E-006
Generator Sets	8.81342E-001	9.44688E-001	-7.67502E-002	0.00000E+000	9.84890E-001	9.84890E-001	0.00000E+000	1.17951E-006	1.17951E-006	0.00000E+000	0.00000E+000	1.17756E-006
Pavers	8.40657E-001	9.47469E-001	-2.10316E-001	0.00000E+000	9.80501E-001	9.78804E-001	0.00000E+000	1.27717E-006	1.27717E-006	0.00000E+000	0.00000E+000	9.51728E-007
Paving Equipment	8.17511E-001	9.40635E-001	-2.08388E-001	0.00000E+000	9.78185E-001	9.76303E-001	0.00000E+000	1.43819E-006	1.43819E-006	0.00000E+000	0.00000E+000	1.42896E-006
Rollers	8.92218E-001	9.57719E-001	-3.16882E-003	0.00000E+000	9.89383E-001	9.88456E-001	0.00000E+000	1.10035E-006	1.10035E-006	0.00000E+000	0.00000E+000	1.09329E-006
Tractors/Loaders/Backhoes	8.75365E-001	9.52492E-001	1.59948E-002	0.00000E+000	9.88387E-001	9.87377E-001	0.00000E+000	1.14826E-006	1.14826E-006	0.00000E+000	0.00000E+000	1.22865E-006
Welders	9.10012E-001	5.05734E-001	2.12093E-001	0.00000E+000	9.88204E-001	9.88204E-001	0.00000E+000	1.06258E-006	1.06258E-006	0.00000E+000	0.00000E+000	1.05791E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

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

Water Mitigation Measures

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

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

Valiano - Vertical Development (Phase 3 - N 3)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	35.00	Dwelling Unit	11.36	63,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 2 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 2 construction crews.

Off-road Equipment -

Trips and VMT -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00

tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	300.00	185.00
tblConstructionPhase	NumDays	20.00	185.00
tblConstructionPhase	PhaseEndDate	3/29/2019	10/10/2018
tblConstructionPhase	PhaseEndDate	6/26/2019	10/10/2018
tblConstructionPhase	PhaseStartDate	10/11/2018	4/24/2018
tblConstructionPhase	PhaseStartDate	10/11/2018	1/25/2018
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	41.80	0.00
tblFireplaces	NumberWood	26.60	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	88.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,951,705.95	0.00
tblWater	OutdoorWaterUseRate	3,121,727.66	0.00
tblWoodstoves	NumberCatalytic	3.80	0.00
tblWoodstoves	NumberNoncatalytic	3.80	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	21.4882	66.4625	53.9362	0.0857	0.4392	4.0897	4.5289	0.1176	3.8347	3.9523	0.0000	8,308.7573	8,308.7573	2.0221	0.0000	8,351.2214
Total	**21.4882**	**66.4625**	**53.9362**	**0.0857**	**0.4392**	**4.0897**	**4.5289**	**0.1176**	**3.8347**	**3.9523**	**0.0000**	**8,308.7573**	**8,308.7573**	**2.0221**	**0.0000**	**8,351.2214**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	15.1980	5.6820	56.1044	0.0857	0.4392	0.0729	0.5121	0.1176	0.0719	0.1895	0.0000	8,308.7573	8,308.7573	2.0221	0.0000	8,351.2214
Total	**15.1980**	**5.6820**	**56.1044**	**0.0857**	**0.4392**	**0.0729**	**0.5121**	**0.1176**	**0.0719**	**0.1895**	**0.0000**	**8,308.7573**	**8,308.7573**	**2.0221**	**0.0000**	**8,351.2214**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**29.27**	**91.45**	**-4.02**	**0.00**	**0.00**	**98.22**	**88.69**	**0.00**	**98.12**	**95.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/25/2018	10/10/2018	5	185	
2	Paving	Paving	1/25/2018	10/10/2018	5	185	
3	Architectural Coating	Architectural Coating	4/24/2018	10/10/2018	5	122	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 277,020; Residential Outdoor: 92,340; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	6	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7.00	97	0.37
Building Construction	Welders	2	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	18	27.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.3374	46.5217	35.0653	0.0536		2.9886	2.9886		2.8096	2.8096		5,219.8779	5,219.8779	1.2774		5,246.7034
Total	**5.3374**	**46.5217**	**35.0653**	**0.0536**		**2.9886**	**2.9886**		**2.8096**	**2.8096**		**5,219.8779**	**5,219.8779**	**1.2774**		**5,246.7034**

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	0.0720	0.6124	0.7960	1.9000e-003	0.0531	9.2400e-003	0.0623	0.0152	8.5000e-003	0.0237		184.4241	184.4241	1.3700e-003		184.4528
Worker	0.0782	0.0919	0.9917	2.8100e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603		216.9980	216.9980	0.0101		217.2103
Total	**0.1502**	**0.7043**	**1.7877**	**4.7100e-003**	**0.2749**	**0.0108**	**0.2857**	**0.0740**	**9.9600e-003**	**0.0840**		**401.4221**	**401.4221**	**0.0115**		**401.6631**

3.2 Building Construction - 2018

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	0.6530	3.7891	34.8220	0.0536		0.0406	0.0406		0.0406	0.0406	0.0000	5,219.8779	5,219.8779	1.2774		5,246.7034
Total	**0.6530**	**3.7891**	**34.8220**	**0.0536**		**0.0406**	**0.0406**		**0.0406**	**0.0406**	**0.0000**	**5,219.8779**	**5,219.8779**	**1.2774**		**5,246.7034**

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	0.0720	0.6124	0.7960	1.9000e-003	0.0531	9.2400e-003	0.0623	0.0152	8.5000e-003	0.0237		184.4241	184.4241	1.3700e-003		184.4528
Worker	0.0782	0.0919	0.9917	2.8100e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603		216.9980	216.9980	0.0101		217.2103
Total	**0.1502**	**0.7043**	**1.7877**	**4.7100e-003**	**0.2749**	**0.0108**	**0.2857**	**0.0740**	**9.9600e-003**	**0.0840**		**401.4221**	**401.4221**	**0.0115**		**401.6631**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.4 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**14.3313**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003		40.2241
Total	**0.0145**	**0.0170**	**0.1837**	**5.2000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**40.1848**	**40.1848**	**1.8700e-003**		**40.2241**

3.4 Architectural Coating - 2018

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	14.0327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**14.0624**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003		40.2241
Total	**0.0145**	**0.0170**	**0.1837**	**5.2000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**40.1848**	**40.1848**	**1.8700e-003**		**40.2241**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Unmitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 3 - N 3)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	35.00	Dwelling Unit	11.36	63,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 2 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 2 construction crews.

Off-road Equipment -

Trips and VMT -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00

tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	300.00	185.00
tblConstructionPhase	NumDays	20.00	185.00
tblConstructionPhase	PhaseEndDate	3/29/2019	10/10/2018
tblConstructionPhase	PhaseEndDate	6/26/2019	10/10/2018
tblConstructionPhase	PhaseStartDate	10/11/2018	4/24/2018
tblConstructionPhase	PhaseStartDate	10/11/2018	1/25/2018
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	41.80	0.00
tblFireplaces	NumberWood	26.60	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	88.97	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,951,705.95	0.00
tblWater	OutdoorWaterUseRate	3,121,727.66	0.00
tblWoodstoves	NumberCatalytic	3.80	0.00
tblWoodstoves	NumberNoncatalytic	3.80	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	21.5062	66.4962	54.1604	0.0854	0.4392	4.0898	4.5290	0.1176	3.8348	3.9524	0.0000	8,284.3052	8,284.3052	2.0221	0.0000	8,326.7702
Total	**21.5062**	**66.4962**	**54.1604**	**0.0854**	**0.4392**	**4.0898**	**4.5290**	**0.1176**	**3.8348**	**3.9524**	**0.0000**	**8,284.3052**	**8,284.3052**	**2.0221**	**0.0000**	**8,326.7702**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	15.2159	5.7157	56.3286	0.0854	0.4392	0.0730	0.5122	0.1176	0.0720	0.1896	0.0000	8,284.3052	8,284.3052	2.0221	0.0000	8,326.7701
Total	**15.2159**	**5.7157**	**56.3286**	**0.0854**	**0.4392**	**0.0730**	**0.5122**	**0.1176**	**0.0720**	**0.1896**	**0.0000**	**8,284.3052**	**8,284.3052**	**2.0221**	**0.0000**	**8,326.7701**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**29.25**	**91.40**	**-4.00**	**0.00**	**0.00**	**98.22**	**88.69**	**0.00**	**98.12**	**95.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/25/2018	10/10/2018	5	185	
2	Paving	Paving	1/25/2018	10/10/2018	5	185	
3	Architectural Coating	Architectural Coating	4/24/2018	10/10/2018	5	122	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 277,020; Residential Outdoor: 92,340; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	6	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7.00	97	0.37
Building Construction	Welders	2	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	18	27.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.3374	46.5217	35.0653	0.0536		2.9886	2.9886		2.8096	2.8096		5,219.8779	5,219.8779	1.2774		5,246.7034
Total	**5.3374**	**46.5217**	**35.0653**	**0.0536**		**2.9886**	**2.9886**		**2.8096**	**2.8096**		**5,219.8779**	**5,219.8779**	**1.2774**		**5,246.7034**

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	0.0827	0.6266	1.0861	1.8900e-003	0.0531	9.3300e-003	0.0624	0.0152	8.5900e-003	0.0237		183.0023	183.0023	1.4100e-003		183.0318
Worker	0.0824	0.1031	0.9538	2.6400e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603		203.7679	203.7679	0.0101		203.9802
Total	**0.1651**	**0.7297**	**2.0399**	**4.5300e-003**	**0.2749**	**0.0109**	**0.2858**	**0.0740**	**0.0101**	**0.0840**		**386.7701**	**386.7701**	**0.0115**		**387.0120**

3.2 Building Construction - 2018

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	0.6530	3.7891	34.8220	0.0536		0.0406	0.0406		0.0406	0.0406	0.0000	5,219.8779	5,219.8779	1.2774		5,246.7034
Total	**0.6530**	**3.7891**	**34.8220**	**0.0536**		**0.0406**	**0.0406**		**0.0406**	**0.0406**	**0.0000**	**5,219.8779**	**5,219.8779**	**1.2774**		**5,246.7034**

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	0.0827	0.6266	1.0861	1.8900e-003	0.0531	9.3300e-003	0.0624	0.0152	8.5900e-003	0.0237		183.0023	183.0023	1.4100e-003		183.0318
Worker	0.0824	0.1031	0.9538	2.6400e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603		203.7679	203.7679	0.0101		203.9802
Total	**0.1651**	**0.7297**	**2.0399**	**4.5300e-003**	**0.2749**	**0.0109**	**0.2858**	**0.0740**	**0.0101**	**0.0840**		**386.7701**	**386.7701**	**0.0115**		**387.0120**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.4 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.0327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**14.3313**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.0153	0.0191	0.1766	4.9000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		37.7348	37.7348	1.8700e-003		37.7741
Total	**0.0153**	**0.0191**	**0.1766**	**4.9000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**37.7348**	**37.7348**	**1.8700e-003**		**37.7741**

3.4 Architectural Coating - 2018

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	14.0327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**14.0624**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.0153	0.0191	0.1766	4.9000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		37.7348	37.7348	1.8700e-003		37.7741
Total	**0.0153**	**0.0191**	**0.1766**	**4.9000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**37.7348**	**37.7348**	**1.8700e-003**		**37.7741**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058
Unmitigated	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	5.1993	5.1993	5.0700e-003	0.0000	5.3058

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0882	0.0335	2.8971	1.5000e-004		0.0159	0.0159		0.0159	0.0159		5.1993	5.1993	5.0700e-003		5.3058
Total	**0.0882**	**0.0335**	**2.8971**	**1.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**5.1993**	**5.1993**	**5.0700e-003**	**0.0000**	**5.3058**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 3 - N 3)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.02	0.94	0.01	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.85	0.90	0.01	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.81	0.94	-0.16	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 2	15.00
Cranes	Diesel	Tier 4 Final	2	2	Level 2	15.00
Forklifts	Diesel	Tier 4 Final	6	6	Level 2	15.00
Generator Sets	Diesel	Tier 4 Final	2	2	Level 2	15.00
Pavers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Paving Equipment	Diesel	Tier 4 Final	2	2	Level 2	15.00
Rollers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	6	6	Level 2	15.00
Welders	Diesel	Tier 4 Final	2	2	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.82200E-002	1.22350E-001	1.13110E-001	1.80000E-004	9.18000E-003	9.18000E-003	0.00000E+000	1.55749E+001	1.55749E+001	1.48000E-003	0.00000E+000	1.56060E+001
Cranes	9.03900E-002	1.08022E+000	3.99390E-001	9.10000E-004	4.67500E-002	4.30100E-002	0.00000E+000	8.34156E+001	8.34156E+001	2.59700E-002	0.00000E+000	8.39610E+001
Forklifts	9.88700E-002	8.73850E-001	6.72230E-001	8.50000E-004	6.97400E-002	6.41600E-002	0.00000E+000	7.74301E+001	7.74301E+001	2.41100E-002	0.00000E+000	7.79363E+001
Generator Sets	9.35000E-002	7.60970E-001	6.93230E-001	1.22000E-003	4.84700E-002	4.84700E-002	0.00000E+000	1.04563E+002	1.04563E+002	7.54000E-003	0.00000E+000	1.04722E+002
Pavers	5.80200E-002	6.41890E-001	5.20600E-001	8.40000E-004	3.13600E-002	2.88500E-002	0.00000E+000	7.63514E+001	7.63514E+001	2.37700E-002	0.00000E+000	7.68506E+001
Paving Equipment	4.33200E-002	4.84380E-001	4.62080E-001	7.40000E-004	2.37200E-002	2.18200E-002	0.00000E+000	6.77682E+001	6.77682E+001	2.11000E-002	0.00000E+000	6.82113E+001
Rollers	4.77100E-002	4.61280E-001	3.58060E-001	4.80000E-004	3.17400E-002	2.92000E-002	0.00000E+000	4.42912E+001	4.42912E+001	1.37900E-002	0.00000E+000	4.45808E+001
Tractors/Loaders/ Backhoes	1.29230E-001	1.27706E+000	1.13477E+000	1.51000E-003	9.04700E-002	8.32300E-002	0.00000E+000	1.37794E+002	1.37794E+002	4.29000E-002	0.00000E+000	1.38695E+002
Welders	8.17200E-002	3.11160E-001	3.43920E-001	4.70000E-004	2.10100E-002	2.10100E-002	0.00000E+000	3.48208E+001	3.48208E+001	6.68000E-003	0.00000E+000	3.49611E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.81000E-003	6.68000E-003	1.11780E-001	1.80000E-004	1.20000E-004	1.20000E-004	0.00000E+000	1.55749E+001	1.55749E+001	1.48000E-003	0.00000E+000	1.56059E+001
Cranes	1.12300E-002	4.13500E-002	4.11650E-001	9.10000E-004	7.50000E-004	7.50000E-004	0.00000E+000	8.34155E+001	8.34155E+001	2.59700E-002	0.00000E+000	8.39609E+001
Forklifts	1.04500E-002	3.85100E-002	6.44670E-001	8.50000E-004	7.00000E-004	7.00000E-004	0.00000E+000	7.74300E+001	7.74300E+001	2.41100E-002	0.00000E+000	7.79362E+001
Generator Sets	1.21700E-002	4.48200E-002	7.50430E-001	1.22000E-003	8.10000E-004	8.10000E-004	0.00000E+000	1.04563E+002	1.04563E+002	7.54000E-003	0.00000E+000	1.04722E+002
Pavers	1.02800E-002	3.78600E-002	6.33810E-001	8.40000E-004	6.90000E-004	6.90000E-004	0.00000E+000	7.63514E+001	7.63514E+001	2.37700E-002	0.00000E+000	7.68505E+001
Paving Equipment	9.16000E-003	3.37500E-002	5.64990E-001	7.40000E-004	6.10000E-004	6.10000E-004	0.00000E+000	6.77682E+001	6.77682E+001	2.11000E-002	0.00000E+000	6.82112E+001
Rollers	5.95000E-003	2.19200E-002	3.67000E-001	4.80000E-004	4.00000E-004	4.00000E-004	0.00000E+000	4.42911E+001	4.42911E+001	1.37900E-002	0.00000E+000	4.45807E+001
Tractors/Loaders/Backhoes	1.84400E-002	6.79300E-002	1.13737E+000	1.51000E-003	1.23000E-003	1.23000E-003	0.00000E+000	1.37794E+002	1.37794E+002	4.29000E-002	0.00000E+000	1.38695E+002
Welders	8.10000E-003	1.57880E-001	2.76920E-001	4.70000E-004	2.70000E-004	2.70000E-004	0.00000E+000	3.48208E+001	3.48208E+001	6.68000E-003	0.00000E+000	3.49610E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	9.00659E-001	9.45403E-001	1.17585E-002	0.00000E+000	9.86928E-001	9.86928E-001	0.00000E+000	1.28412E-006	1.28412E-006	0.00000E+000	0.00000E+000	6.40781E-007
Cranes	8.75761E-001	9.61721E-001	-3.06968E-002	0.00000E+000	9.83957E-001	9.82562E-001	0.00000E+000	1.19882E-006	1.19882E-006	0.00000E+000	0.00000E+000	1.19103E-006
Forklifts	8.94306E-001	9.55931E-001	4.09979E-002	0.00000E+000	9.89963E-001	9.89090E-001	0.00000E+000	1.16234E-006	1.16234E-006	0.00000E+000	0.00000E+000	1.28310E-006
Generator Sets	8.69840E-001	9.41101E-001	-8.25123E-002	0.00000E+000	9.83289E-001	9.83289E-001	0.00000E+000	1.24327E-006	1.24327E-006	0.00000E+000	0.00000E+000	1.24138E-006
Pavers	8.22820E-001	9.41018E-001	-2.17461E-001	0.00000E+000	9.77997E-001	9.76083E-001	0.00000E+000	1.17876E-006	1.17876E-006	0.00000E+000	0.00000E+000	1.17110E-006
Paving Equipment	7.88550E-001	9.30323E-001	-2.22710E-001	0.00000E+000	9.74283E-001	9.72044E-001	0.00000E+000	1.18049E-006	1.18049E-006	0.00000E+000	0.00000E+000	1.17283E-006
Rollers	8.75288E-001	9.52480E-001	-2.49679E-002	0.00000E+000	9.87398E-001	9.86301E-001	0.00000E+000	1.35467E-006	1.35467E-006	0.00000E+000	0.00000E+000	1.34587E-006
Tractors/Loaders/Backhoes	8.57309E-001	9.46808E-001	-2.29121E-003	0.00000E+000	9.86404E-001	9.85222E-001	0.00000E+000	1.16115E-006	1.16115E-006	0.00000E+000	0.00000E+000	1.15361E-006
Welders	9.00881E-001	4.92608E-001	1.94813E-001	0.00000E+000	9.87149E-001	9.87149E-001	0.00000E+000	1.43592E-006	1.43592E-006	0.00000E+000	0.00000E+000	1.14413E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.02	0.01	0.02	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

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

Water Mitigation Measures

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

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

Valiano - Vertical Development (Phase 4 - N 4)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 3 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 3 construction crews.

Off-road Equipment -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	ReapplicationRatePercent	10	0

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	35.00	104.00
tblConstructionPhase	NumDays	440.00	167.00
tblConstructionPhase	NumDays	35.00	167.00
tblConstructionPhase	PhaseEndDate	10/24/2019	5/31/2019
tblConstructionPhase	PhaseEndDate	1/21/2020	5/31/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	1/8/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	10/11/2018
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00
tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	10.0916	89.1517	72.7386	0.1176	0.8724	5.4554	6.3278	0.2347	5.1091	5.3438	0.0000	11,342.5904	11,342.5904	2.6516	0.0000	11,398.2734
2019	48.4391	81.7225	73.3185	0.1220	0.9874	4.8260	5.8134	0.2652	4.5284	4.7936	0.0000	11,573.7576	11,573.7576	2.6458	0.0000	11,629.3192
Total	**58.5307**	**170.8742**	**146.0571**	**0.2396**	**1.8598**	**10.2814**	**12.1411**	**0.4999**	**9.6375**	**10.1374**	**0.0000**	**22,916.3480**	**22,916.3480**	**5.2974**	**0.0000**	**23,027.5926**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.7280	8.9012	74.8069	0.1176	0.8724	0.1131	0.9855	0.2347	0.1104	0.3452	0.0000	11,342.5904	11,342.5904	2.6516	0.0000	11,398.2734
2019	40.9757	8.8609	76.7441	0.1220	0.9874	0.1139	1.1012	0.2652	0.1113	0.3765	0.0000	11,573.7576	11,573.7576	2.6458	0.0000	11,629.3192
Total	**42.7037**	**17.7621**	**151.5509**	**0.2396**	**1.8598**	**0.2270**	**2.0868**	**0.4999**	**0.2217**	**0.7217**	**0.0000**	**22,916.3480**	**22,916.3480**	**5.2974**	**0.0000**	**23,027.5925**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**27.04**	**89.61**	**-3.76**	**0.00**	**0.00**	**97.79**	**82.81**	**0.00**	**97.70**	**92.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/11/2018	5/31/2019	5	167	
2	Paving	Paving	10/11/2018	5/31/2019	5	167	
3	Architectural Coating	Architectural Coating	1/8/2019	5/31/2019	5	104	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 251,505; Residential Outdoor: 83,835; Non-Residential Indoor: 163,350; Non-Residential Outdoor: 54,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	3	7.00	226	0.29
Building Construction	Forklifts	9	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	9	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	27	71.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.0061	69.7825	52.5980	0.0804		4.4828	4.4828		4.2143	4.2143		7,829.8168	7,829.8168	1.9161		7,870.0551
Total	**8.0061**	**69.7825**	**52.5980**	**0.0804**		**4.4828**	**4.4828**		**4.2143**	**4.2143**		**7,829.8168**	**7,829.8168**	**1.9161**		**7,870.0551**

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	0.2250	1.9138	2.4874	5.9300e-003	0.1659	0.0289	0.1948	0.0473	0.0266	0.0739		576.3253	576.3253	4.2700e-003		576.4150
Worker	0.2056	0.2416	2.6078	7.3900e-003	0.5833	4.1600e-003	0.5874	0.1547	3.8500e-003	0.1586		570.6244	570.6244	0.0266		571.1827
Total	**0.4307**	**2.1554**	**5.0953**	**0.0133**	**0.7492**	**0.0330**	**0.7822**	**0.2020**	**0.0304**	**0.2325**		**1,146.9497**	**1,146.9497**	**0.0309**		**1,147.5977**

3.2 Building Construction - 2018

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,829.8168	7,829.8168	1.9161		7,870.0551
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,829.8168**	**7,829.8168**	**1.9161**		**7,870.0551**

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	0.2250	1.9138	2.4874	5.9300e-003	0.1659	0.0289	0.1948	0.0473	0.0266	0.0739		576.3253	576.3253	4.2700e-003		576.4150
Worker	0.2056	0.2416	2.6078	7.3900e-003	0.5833	4.1600e-003	0.5874	0.1547	3.8500e-003	0.1586		570.6244	570.6244	0.0266		571.1827
Total	**0.4307**	**2.1554**	**5.0953**	**0.0133**	**0.7492**	**0.0330**	**0.7822**	**0.2020**	**0.0304**	**0.2325**		**1,146.9497**	**1,146.9497**	**0.0309**		**1,147.5977**

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0549	62.8951	51.3610	0.0804		3.8551	3.8551		3.6248	3.6248		7,742.2853	7,742.2853	1.8837		7,781.8437
Total	**7.0549**	**62.8951**	**51.3610**	**0.0804**		**3.8551**	**3.8551**		**3.6248**	**3.6248**		**7,742.2853**	**7,742.2853**	**1.8837**		**7,781.8437**

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	0.2107	1.7423	2.3636	5.9200e-003	0.1659	0.0269	0.1928	0.0473	0.0247	0.0720		566.3987	566.3987	4.1600e-003		566.4861
Worker	0.1911	0.2232	2.4051	7.3900e-003	0.5833	4.1300e-003	0.5874	0.1547	3.8300e-003	0.1585		550.0032	550.0032	0.0250		550.5284
Total	**0.4018**	**1.9655**	**4.7686**	**0.0133**	**0.7492**	**0.0310**	**0.7801**	**0.2020**	**0.0285**	**0.2306**		**1,116.4019**	**1,116.4019**	**0.0292**		**1,117.0145**

3.2 Building Construction - 2019

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,742.2853	7,742.2853	1.8837		7,781.8437
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,742.2853**	**7,742.2853**	**1.8837**		**7,781.8437**

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	0.2107	1.7423	2.3636	5.9200e-003	0.1659	0.0269	0.1928	0.0473	0.0247	0.0720		566.3987	566.3987	4.1600e-003		566.4861
Worker	0.1911	0.2232	2.4051	7.3900e-003	0.5833	4.1300e-003	0.5874	0.1547	3.8300e-003	0.1585		550.0032	550.0032	0.0250		550.5284
Total	**0.4018**	**1.9655**	**4.7686**	**0.0133**	**0.7492**	**0.0310**	**0.7801**	**0.2020**	**0.0285**	**0.2306**		**1,116.4019**	**1,116.4019**	**0.0292**		**1,117.0145**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0435	0.0510	0.5510	1.5600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		120.5544	120.5544	5.6200e-003		120.6724
Total	**0.0435**	**0.0510**	**0.5510**	**1.5600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**120.5544**	**120.5544**	**5.6200e-003**		**120.6724**

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
Total	**0.0404**	**0.0472**	**0.5081**	**1.5600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**116.1979**	**116.1979**	**5.2800e-003**		**116.3088**

3.3 Paving - 2019

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

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	0.0404	0.0472	0.5081	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		116.1979	116.1979	5.2800e-003		116.3088
Total	**0.0404**	**0.0472**	**0.5081**	**1.5600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**116.1979**	**116.1979**	**5.2800e-003**		**116.3088**

3.4 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.2121					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**39.4785**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0377	0.0440	0.4742	1.4600e-003	0.1150	8.1000e-004	0.1158	0.0305	7.6000e-004	0.0313		108.4513	108.4513	4.9300e-003		108.5549
Total	**0.0377**	**0.0440**	**0.4742**	**1.4600e-003**	**0.1150**	**8.1000e-004**	**0.1158**	**0.0305**	**7.6000e-004**	**0.0313**		**108.4513**	**108.4513**	**4.9300e-003**		**108.5549**

3.4 Architectural Coating - 2019

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	39.2121					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**39.2418**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0377	0.0440	0.4742	1.4600e-003	0.1150	8.1000e-004	0.1158	0.0305	7.6000e-004	0.0313		108.4513	108.4513	4.9300e-003		108.5549
Total	**0.0377**	**0.0440**	**0.4742**	**1.4600e-003**	**0.1150**	**8.1000e-004**	**0.1158**	**0.0305**	**7.6000e-004**	**0.0313**		**108.4513**	**108.4513**	**4.9300e-003**		**108.5549**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 4 - N 4)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Single Family Housing	76.00	Dwelling Unit	24.68	136,800.00	217

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming 3 construction crews for building construction, and paving and architectural coating would be spread out over the course of construction.

Off-road Equipment -

Off-road Equipment - Assuming 3 construction crews.

Off-road Equipment -

Architectural Coating - Rule 67

Vehicle Trips - Construction only.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - Construction only.

Consumer Products - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	ReapplicationRatePercent	10	0

tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	35.00	104.00
tblConstructionPhase	NumDays	440.00	167.00
tblConstructionPhase	NumDays	35.00	167.00
tblConstructionPhase	PhaseEndDate	10/24/2019	5/31/2019
tblConstructionPhase	PhaseEndDate	1/21/2020	5/31/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	1/8/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	10/11/2018
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	5,089.81	0.00
tblEnergyUse	NT24NG	5,819.00	0.00
tblEnergyUse	T24E	425.62	0.00
tblEnergyUse	T24NG	21,834.49	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberWood	24.15	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	0.21	0.00
tblSolidWaste	SolidWasteGenerationRate	80.77	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	0.00
tblWater	IndoorWaterUseRate	4,495,627.77	0.00
tblWater	OutdoorWaterUseRate	2,978,703.37	0.00
tblWater	OutdoorWaterUseRate	2,834,200.11	0.00
tblWoodstoves	NumberCatalytic	3.45	0.00
tblWoodstoves	NumberNoncatalytic	3.45	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	10.1383	89.2318	73.5246	0.1170	0.8724	5.4557	6.3281	0.2347	5.1094	5.3441	0.0000	11,296.0068	11,296.0068	2.6517	0.0000	11,351.6923
2019	48.4834	81.8003	74.0585	0.1213	0.9874	4.8263	5.8136	0.2652	4.5286	4.7938	0.0000	11,522.1170	11,522.1170	2.6459	0.0000	11,577.6812
Total	**58.6216**	**171.0321**	**147.5831**	**0.2384**	**1.8598**	**10.2819**	**12.1417**	**0.4999**	**9.6380**	**10.1379**	**0.0000**	**22,818.1238**	**22,818.1238**	**5.2976**	**0.0000**	**22,929.3735**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.7748	8.9812	75.5929	0.1170	0.8724	0.1134	0.9858	0.2347	0.1107	0.3454	0.0000	11,296.0068	11,296.0068	2.6517	0.0000	11,351.6923
2019	41.0199	8.9387	77.4840	0.1213	0.9874	0.1141	1.1015	0.2652	0.1115	0.3768	0.0000	11,522.1170	11,522.1170	2.6459	0.0000	11,577.6812
Total	**42.7946**	**17.9200**	**153.0769**	**0.2384**	**1.8598**	**0.2276**	**2.0873**	**0.4999**	**0.2222**	**0.7222**	**0.0000**	**22,818.1238**	**22,818.1238**	**5.2976**	**0.0000**	**22,929.3735**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**27.00**	**89.52**	**-3.72**	**0.00**	**0.00**	**97.79**	**82.81**	**0.00**	**97.69**	**92.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/11/2018	5/31/2019	5	167	
2	Paving	Paving	10/11/2018	5/31/2019	5	167	
3	Architectural Coating	Architectural Coating	1/8/2019	5/31/2019	5	104	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 251,505; Residential Outdoor: 83,835; Non-Residential Indoor: 163,350; Non-Residential Outdoor: 54,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	3	7.00	226	0.29
Building Construction	Forklifts	9	8.00	89	0.20
Building Construction	Generator Sets	3	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	9	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	27	71.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.0061	69.7825	52.5980	0.0804		4.4828	4.4828		4.2143	4.2143		7,829.8168	7,829.8168	1.9161		7,870.0551
Total	**8.0061**	**69.7825**	**52.5980**	**0.0804**		**4.4828**	**4.4828**		**4.2143**	**4.2143**		**7,829.8168**	**7,829.8168**	**1.9161**		**7,870.0551**

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	0.2585	1.9582	3.3941	5.9000e-003	0.1659	0.0292	0.1951	0.0473	0.0268	0.0742		571.8821	571.8821	4.3900e-003		571.9743
Worker	0.2166	0.2710	2.5082	6.9300e-003	0.5833	4.1600e-003	0.5874	0.1547	3.8500e-003	0.1586		535.8341	535.8341	0.0266		536.3925
Total	**0.4751**	**2.2292**	**5.9023**	**0.0128**	**0.7492**	**0.0333**	**0.7825**	**0.2020**	**0.0307**	**0.2327**		**1,107.7161**	**1,107.7161**	**0.0310**		**1,108.3667**

3.2 Building Construction - 2018

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,829.8168	7,829.8168	1.9161		7,870.0551
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,829.8168**	**7,829.8168**	**1.9161**		**7,870.0551**

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	0.2585	1.9582	3.3941	5.9000e-003	0.1659	0.0292	0.1951	0.0473	0.0268	0.0742		571.8821	571.8821	4.3900e-003		571.9743
Worker	0.2166	0.2710	2.5082	6.9300e-003	0.5833	4.1600e-003	0.5874	0.1547	3.8500e-003	0.1586		535.8341	535.8341	0.0266		536.3925
Total	**0.4751**	**2.2292**	**5.9023**	**0.0128**	**0.7492**	**0.0333**	**0.7825**	**0.2020**	**0.0307**	**0.2327**		**1,107.7161**	**1,107.7161**	**0.0310**		**1,108.3667**

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0549	62.8951	51.3610	0.0804		3.8551	3.8551		3.6248	3.6248		7,742.2853	7,742.2853	1.8837		7,781.8437
Total	**7.0549**	**62.8951**	**51.3610**	**0.0804**		**3.8551**	**3.8551**		**3.6248**	**3.6248**		**7,742.2853**	**7,742.2853**	**1.8837**		**7,781.8437**

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	0.2410	1.7818	3.2452	5.8900e-003	0.1659	0.0271	0.1930	0.0473	0.0249	0.0723		562.0225	562.0225	4.2900e-003		562.1125
Worker	0.2010	0.2504	2.3045	6.9300e-003	0.5833	4.1300e-003	0.5874	0.1547	3.8300e-003	0.1585		516.4455	516.4455	0.0250		516.9707
Total	**0.4420**	**2.0323**	**5.5497**	**0.0128**	**0.7492**	**0.0312**	**0.7804**	**0.2020**	**0.0288**	**0.2308**		**1,078.4680**	**1,078.4680**	**0.0293**		**1,079.0833**

3.2 Building Construction - 2019

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	0.9794	5.6837	52.2331	0.0804		0.0609	0.0609		0.0609	0.0609	0.0000	7,742.2853	7,742.2853	1.8837		7,781.8437
Total	**0.9794**	**5.6837**	**52.2331**	**0.0804**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**7,742.2853**	**7,742.2853**	**1.8837**		**7,781.8437**

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	0.2410	1.7818	3.2452	5.8900e-003	0.1659	0.0271	0.1930	0.0473	0.0249	0.0723		562.0225	562.0225	4.2900e-003		562.1125
Worker	0.2010	0.2504	2.3045	6.9300e-003	0.5833	4.1300e-003	0.5874	0.1547	3.8300e-003	0.1585		516.4455	516.4455	0.0250		516.9707
Total	**0.4420**	**2.0323**	**5.5497**	**0.0128**	**0.7492**	**0.0312**	**0.7804**	**0.2020**	**0.0288**	**0.2308**		**1,078.4680**	**1,078.4680**	**0.0293**		**1,079.0833**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6114**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.3 Paving - 2018

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0458	0.0573	0.5299	1.4600e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		113.2044	113.2044	5.6200e-003		113.3224
Total	**0.0458**	**0.0573**	**0.5299**	**1.4600e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**113.2044**	**113.2044**	**5.6200e-003**		**113.3224**

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4259**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

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	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
Total	**0.0425**	**0.0529**	**0.4869**	**1.4600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**109.1082**	**109.1082**	**5.2800e-003**		**109.2192**

3.3 Paving - 2019

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	0.2745	1.0111	16.9276	0.0223		0.0183	0.0183		0.0183	0.0183	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.0111**	**16.9276**	**0.0223**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

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	0.0425	0.0529	0.4869	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		109.1082	109.1082	5.2800e-003		109.2192
Total	**0.0425**	**0.0529**	**0.4869**	**1.4600e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**109.1082**	**109.1082**	**5.2800e-003**		**109.2192**

3.4 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.2121					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**39.4785**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0396	0.0494	0.4544	1.3700e-003	0.1150	8.1000e-004	0.1158	0.0305	7.6000e-004	0.0313		101.8343	101.8343	4.9300e-003		101.9379
Total	**0.0396**	**0.0494**	**0.4544**	**1.3700e-003**	**0.1150**	**8.1000e-004**	**0.1158**	**0.0305**	**7.6000e-004**	**0.0313**		**101.8343**	**101.8343**	**4.9300e-003**		**101.9379**

3.4 Architectural Coating - 2019

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	39.2121					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**39.2418**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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	0.0396	0.0494	0.4544	1.3700e-003	0.1150	8.1000e-004	0.1158	0.0305	7.6000e-004	0.0313		101.8343	101.8343	4.9300e-003		101.9379
Total	**0.0396**	**0.0494**	**0.4544**	**1.3700e-003**	**0.1150**	**8.1000e-004**	**0.1158**	**0.0305**	**7.6000e-004**	**0.0313**		**101.8343**	**101.8343**	**4.9300e-003**		**101.9379**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

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					
Single Family Housing	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217
Unmitigated	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346	0.0000	11.2905	11.2905	0.0110	0.0000	11.5217

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1916	0.0728	6.2912	3.3000e-004		0.0346	0.0346		0.0346	0.0346		11.2905	11.2905	0.0110		11.5217
Total	**0.1916**	**0.0728**	**6.2912**	**3.3000e-004**		**0.0346**	**0.0346**		**0.0346**	**0.0346**	**0.0000**	**11.2905**	**11.2905**	**0.0110**	**0.0000**	**11.5217**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Valiano - Vertical Development (Phase 4 - N 4)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.01	0.92	0.00	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.82	0.88	-0.01	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.79	0.93	-0.17	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 2	15.00
Cranes	Diesel	Tier 4 Final	3	3	Level 2	15.00
Forklifts	Diesel	Tier 4 Final	9	9	Level 2	15.00
Generator Sets	Diesel	Tier 4 Final	3	3	Level 2	15.00
Pavers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Paving Equipment	Diesel	Tier 4 Final	2	2	Level 2	15.00
Rollers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	9	9	Level 2	15.00
Welders	Diesel	Tier 4 Final	3	3	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.38600E-002	9.54400E-002	9.57500E-002	1.50000E-004	6.70000E-003	6.70000E-003	0.00000E+000	1.32769E+001	1.32769E+001	1.12000E-003	0.00000E+000	1.33005E+001
Cranes	1.13050E-001	1.34877E+000	5.08770E-001	1.24000E-003	5.76300E-002	5.30200E-002	0.00000E+000	1.11757E+002	1.11757E+002	3.51600E-002	0.00000E+000	1.12496E+002
Forklifts	1.24950E-001	1.11153E+000	9.01880E-001	1.15000E-003	8.70700E-002	8.01000E-002	0.00000E+000	1.03747E+002	1.03747E+002	3.26400E-002	0.00000E+000	1.04432E+002
Generator Sets	1.16570E-001	9.75550E-001	9.34730E-001	1.65000E-003	5.97200E-002	5.97200E-002	0.00000E+000	1.41584E+002	1.41584E+002	9.40000E-003	0.00000E+000	1.41782E+002
Pavers	4.83500E-002	5.28720E-001	4.67330E-001	7.60000E-004	2.58700E-002	2.38000E-002	0.00000E+000	6.81968E+001	6.81968E+001	2.14600E-002	0.00000E+000	6.86473E+001
Paving Equipment	3.64400E-002	3.94090E-001	4.15760E-001	6.70000E-004	1.94500E-002	1.79000E-002	0.00000E+000	6.05235E+001	6.05235E+001	1.90400E-002	0.00000E+000	6.09233E+001
Rollers	3.96500E-002	3.88880E-001	3.20150E-001	4.40000E-004	2.60100E-002	2.39300E-002	0.00000E+000	3.95642E+001	3.95642E+001	1.24500E-002	0.00000E+000	3.98256E+001
Tractors/Loaders/ Backhoes	1.60690E-001	1.60373E+000	1.52193E+000	2.04000E-003	1.09520E-001	1.00760E-001	0.00000E+000	1.84543E+002	1.84543E+002	5.80600E-002	0.00000E+000	1.85762E+002
Welders	1.01410E-001	4.11900E-001	4.57210E-001	6.40000E-004	2.61700E-002	2.61700E-002	0.00000E+000	4.71493E+001	4.71493E+001	8.29000E-003	0.00000E+000	4.73233E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.55000E-003	5.69000E-003	9.52900E-002	1.50000E-004	1.00000E-004	1.00000E-004	0.00000E+000	1.32769E+001	1.32769E+001	1.12000E-003	0.00000E+000	1.33005E+001
Cranes	1.52000E-002	5.59900E-002	5.57400E-001	1.24000E-003	1.01000E-003	1.01000E-003	0.00000E+000	1.11757E+002	1.11757E+002	3.51600E-002	0.00000E+000	1.12496E+002
Forklifts	1.41600E-002	5.21400E-002	8.72920E-001	1.15000E-003	9.40000E-004	9.40000E-004	0.00000E+000	1.03747E+002	1.03747E+002	3.26400E-002	0.00000E+000	1.04432E+002
Generator Sets	1.64800E-002	6.06900E-002	1.01612E+000	1.65000E-003	1.10000E-003	1.10000E-003	0.00000E+000	1.41584E+002	1.41584E+002	9.40000E-003	0.00000E+000	1.41782E+002
Pavers	9.28000E-003	3.41700E-002	5.72140E-001	7.60000E-004	6.20000E-004	6.20000E-004	0.00000E+000	6.81967E+001	6.81967E+001	2.14600E-002	0.00000E+000	6.86472E+001
Paving Equipment	8.27000E-003	3.04600E-002	5.10020E-001	6.70000E-004	5.50000E-004	5.50000E-004	0.00000E+000	6.05234E+001	6.05234E+001	1.90400E-002	0.00000E+000	6.09233E+001
Rollers	5.37000E-003	1.97900E-002	3.31300E-001	4.40000E-004	3.60000E-004	3.60000E-004	0.00000E+000	3.95642E+001	3.95642E+001	1.24500E-002	0.00000E+000	3.98256E+001
Tractors/Loaders/Backhoes	2.49700E-002	9.19900E-002	1.54005E+000	2.04000E-003	1.66000E-003	1.66000E-003	0.00000E+000	1.84542E+002	1.84542E+002	5.80600E-002	0.00000E+000	1.85762E+002
Welders	1.09700E-002	2.13770E-001	3.74960E-001	6.40000E-004	3.70000E-004	3.70000E-004	0.00000E+000	4.71492E+001	4.71492E+001	8.29000E-003	0.00000E+000	4.73232E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	8.88167E-001	9.40381E-001	4.80418E-003	0.00000E+000	9.85075E-001	9.85075E-001	0.00000E+000	1.50637E-006	1.50637E-006	0.00000E+000	0.00000E+000	1.50371E-006
Cranes	8.65546E-001	9.58488E-001	-9.55835E-002	0.00000E+000	9.82474E-001	9.80951E-001	0.00000E+000	1.16323E-006	1.16323E-006	0.00000E+000	0.00000E+000	1.15560E-006
Forklifts	8.86675E-001	9.53092E-001	3.21107E-002	0.00000E+000	9.89204E-001	9.88265E-001	0.00000E+000	1.15666E-006	1.15666E-006	0.00000E+000	0.00000E+000	1.14907E-006
Generator Sets	8.58626E-001	9.37789E-001	-8.70733E-002	0.00000E+000	9.81581E-001	9.81581E-001	0.00000E+000	1.20070E-006	1.20070E-006	0.00000E+000	0.00000E+000	1.19902E-006
Pavers	8.08066E-001	9.35372E-001	-2.24274E-001	0.00000E+000	9.76034E-001	9.73950E-001	0.00000E+000	1.17308E-006	1.17308E-006	0.00000E+000	0.00000E+000	1.16538E-006
Paving Equipment	7.73052E-001	9.22708E-001	-2.26717E-001	0.00000E+000	9.71722E-001	9.69274E-001	0.00000E+000	1.15658E-006	1.15658E-006	0.00000E+000	0.00000E+000	1.14899E-006
Rollers	8.64565E-001	9.49110E-001	-3.48274E-002	0.00000E+000	9.86159E-001	9.84956E-001	0.00000E+000	1.26377E-006	1.26377E-006	0.00000E+000	0.00000E+000	1.25547E-006
Tractors/Loaders/Backhoes	8.44608E-001	9.42640E-001	-1.19059E-002	0.00000E+000	9.84843E-001	9.83525E-001	0.00000E+000	1.19214E-006	1.19214E-006	0.00000E+000	0.00000E+000	1.18431E-006
Welders	8.91825E-001	4.81015E-001	1.79895E-001	0.00000E+000	9.85862E-001	9.85862E-001	0.00000E+000	1.27255E-006	1.27255E-006	0.00000E+000	0.00000E+000	1.26788E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.06	0.02	0.06	0.02	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.20	0.49		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

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

Water Mitigation Measures

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

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

Appendix B

ROADWAY CONSTRUCTION EMISSION DATA

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Valiano Project Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.6	15.3	34.9	8.6	1.6	7.0	2.9	1.4	1.5	3,212.1
Grading/Excavation	3.5	17.6	44.1	8.8	1.8	7.0	3.0	1.5	1.5	5,501.6
Drainage/Utilities/Sub-Grade	3.4	15.7	34.3	8.8	1.8	7.0	3.0	1.6	1.5	3,431.0
Paving	1.3	9.0	11.3	0.7	0.7	-	0.6	0.6	-	1,632.0
Maximum (pounds/day)	3.6	17.6	44.1	8.8	1.8	7.0	3.0	1.6	1.5	5,501.6
Total (tons/construction project)	0.1	0.5	1.2	0.2	0.1	0.2	0.1	0.0	0.0	134.3

Notes: Project Start Year -> 2016
Project Length (months) -> 3
Total Project Area (acres) -> 3
Maximum Area Disturbed/Day (acres) -> 1
Total Soil Imported/Exported (yd^3/day)-> 310

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Valiano Project Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.6	7.0	15.9	3.9	0.7	3.2	1.3	0.7	0.7	1,460.1
Grading/Excavation	1.6	8.0	20.0	4.0	0.8	3.2	1.4	0.7	0.7	2,500.7
Drainage/Utilities/Sub-Grade	1.5	7.1	15.6	4.0	0.8	3.2	1.4	0.7	0.7	1,559.5
Paving	0.6	4.1	5.1	0.3	0.3	-	0.3	0.3	-	741.8
Maximum (kilograms/day)	1.6	8.0	20.0	4.0	0.8	3.2	1.4	0.7	0.7	2,500.7
Total (megagrams/construction project)	0.1	0.5	1.1	0.2	0.0	0.2	0.1	0.0	0.0	121.9

Notes: Project Start Year -> 2016
Project Length (months) -> 3
Total Project Area (hectares) -> 1
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 237

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type

Project Name	Valiano Project	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	3.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.98	miles
Total Project Area	2.80	acres
Maximum Area Disturbed/Day	0.70	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	310.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing		0.30	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		1.35	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		0.90	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.45	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	3.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		16
Vehicle miles traveled/day (calculated)		465

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.16	8.45	0.72	0.17	0.10	1720.56
Tons per contruction period	0.00	0.13	0.01	0.00	0.00	25.55

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		5
No. of employees: Grading/Excavation		18
No. of employees: Drainage/Utilities/Sub-Grade		15
No. of employees: Paving		11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grading/Excavation (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Paving (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Grading/Excavation (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Paving (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Pounds per day - Grubbing/Land Clearing	0.076	0.093	0.861	0.021	0.009	197.546
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.003	0.000	0.000	0.652
Pounds per day - Grading/Excavation	0.266	0.324	3.013	0.073	0.031	691.411
Tons per const. Period - Grading/Excavation	0.004	0.005	0.045	0.001	0.000	10.267
Pounds per day - Drainage/Utilities/Sub-Grade	0.228	0.278	2.582	0.062	0.026	592.638
Tons per const. Period - Drain/Util/Sub-Grade	0.002	0.003	0.026	0.001	0.000	5.867
Pounds per day - Paving	0.171	0.208	1.937	0.047	0.020	444.479
Tons per const. Period - Paving	0.001	0.001	0.010	0.000	0.000	2.200
tons per construction period	0.007	0.009	0.083	0.002	0.001	18.987

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Pounds per day - Grubbing/Land Clearing	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.49
Pound per day - Grading/Excavation	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	2.20
Pound per day - Drainage/Utilities/Subgrade	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.01	0.00	0.00	0.00	1.47

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.7	7.0	0.0	1.5	0.0
Fugitive Dust - Grading/Excavation		0.7	7.0	0.1	1.5	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.7	7.0	0.1	1.5	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Rubber Tired Dozers	1.28	4.41	13.72	0.64	0.59	943.69
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	3.5	14.4	34.1	1.5	1.4	2866.6
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	9.5

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Rubber Tired Loaders	0.52	3.12	6.51	0.22	0.20	662.62
1.00	2	Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	3.0	13.9	34.6	1.5	1.4	2941.7
	Grading	tons per phase	0.0	0.2	0.5	0.0	0.0	43.7

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Trenchers	0.59	2.10	4.94	0.39	0.36	376.85
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	3.2	13.0	33.3	1.7	1.6	2690.3
	Drainage	tons per phase	0.0	0.1	0.3	0.0	0.0	26.6

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.42	2.84	4.49	0.22	0.21	481.68
	1	Paving Equipment	0.32	2.69	3.53	0.18	0.16	426.30
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Rollers	0.35	1.51	3.09	0.23	0.21	279.53
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	1.1	7.0	11.1	0.6	0.6	1187.5
	Paving	tons per phase	0.0	0.0	0.1	0.0	0.0	5.9
Total Emissions all Phases (tons per construction period) =>			0.1	0.4	1.0	0.0	0.0	85.7

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Appendix C

DRILLING AND BLASTING EMISSION CALCULATIONS DATA

Drilling and Blasting

			Blast Frequency			
ID	Source	holes/blast	blasts/day	blasts/month	blasts/ year	Tons ANFO/ Blast
B-1	Blasting Activity	12	5	20	40	0.25

Notes
400 sf area of drilling
1,200 lbs (0.6 tons) rock material

Dust - PM10

ID	Source	Area (ft2)	PM10 EF Drilling (lb/hole)	PM2.5 EF Drilling (lb/hole)	Drilling Control Efficiency	PM10 EF Blasting (lb/blast)	PM10 EF Blasting (lb/blast)	PM10 Emissions			PM2.5 Emissions			Source Type
								lb/hr	lb/day	TPY	lb/hr	lb/day	TPY	
B-1	Blasting	400	-	-	-	0.05824	0.00336	0.2912	0.2912	0.005824	0.0168	0.0168	0.0000672	Area
D-1	Drilling	400	0.65	0.12	75%	-	-	0.1625	1.95	0.039	0.03	0.36	0.0072	Area
							Total	0.45	2.24	0.04	0.05	0.38	0.01	

Notes:
1. Emissions Factor Source: AP-42 5th Edition, Section 11.9, Table 11.9-4, October 1998. Assumes PM10 = TSP/2 = 1.3 lbs/hole / 2 = 0.65 lb/hole.
2. Emissions factor for PM2.5 is calculated based on a similar mechanical process for aggreagte roock crushing. The emission factors for tertiary rock crushing will be used, based on AP-42 11.19.2, Table 11.19.2-2, Final Section, updated August 2004. The tertiary crushing emission factor for PM10 is 0.00054 lb/ton and the emissions factor for PM2.5 us 0.00010 lb/ton. The ratio of PM2.5 to PM10 is 0.00010/0.00054 = 0.185. Since the PM10 emission factor is estimated to be 0.65 lb/hole (see note 1), the emission factor for PM2.5 is estimated to be 0.65 lb/hole x 0.185 = 0.12 lb/hole.
3. Control Efficiency estimated to be between 63% and 88%, based on drill rotoclone or similar dust shroud device. Assumed midpoint of range reported.
4. AP-42 5th Edition, Section 11.9, Table 11.9-1. Also referenced Appendix E.2 of Background document to AP-42 5th Edition, Section 11.9.
PM10 EF = $0.000014(A)^{1.5}(0.52)$, where A = horizontal area in ft2 with a scaling factor for $\leq$10um of 0.52
PM2.5 EF = $0.000014(A)^{1.5}(0.03)$, where A = horizontal area in ft2 with a scaling factor for $\leq$2.5um of 0.03
Drill goes up to 20 feet deep for 12 holes. Up to 240 ft/day drilling.

Example Calculation
Blasting PM10 = (0.058 lb/blast) x (1 blast/hr) = 0.058 lb/hr
Blasting PM10 = (0.058 lb/day) x (5 blasts/day) = 0.29 lb/day
Blasting PM10 = (0.29 lb/day) x (40 blast/year) / (2,000 lb/ton) = 0.0058 ton/year

5. Daily drilling emissions based on ability to drill two holes per hour per drill rig for up to 8 hours per day with one drill rig.
6. Based on five blasts for the worst hourly potential to emit (PTE). However, emission rate will be based on average of 5 blasts in an 8-hour day.
7. Based on 5 blasts per day, for the maximum daily PTE.

Blasting Gases - ANFO Emission Factors

ID	Source	CO EF lb/ton	NOX EF lb/ton	SOx EF lb/ton	CO2 EF lb/ton	CH4 EF lb/ton	N2O EF lb/ton
B-1	Blasting Activity	67	17	2	566	0.02	0.005

Blasting Gases - ANFO Emission Rates Criteria Pollutants

ID	Emissions	CO (lb/hr)	CO (lb/day)	CO (TPY)	NOx (lb/hr)	NOx (lb/day)	NOx (TPY)	SOx (lb/hr)	SOx (lb/day)	SOx (TPY)	Source Type
B-1	Blasting Activity	16.75	83.75	0.34	4.25	21.25	0.09	0.50	2.50	0.01	Area

Blasting Gases - ANFO Emission Rates Greenhouse Gases

ID	Emissions	CO2 (lb/hr)	CO2 (lb/day)	CO2 (TPY)	CH4 (lb/hr)	CH4 (lb/day)	CH4 (TPY)	N2O (lb/hr)	N2O (lb/day)	N2O (TPY)	Source Type
B-1	Blasting Activity	141.50	707.50	2.83	0.01	0.03	0.0001	0.0013	0.0063	0.0500	Area

Notes:
1. Emission Factor Source: AP-42 5th Edition, Section 13.3, Table 13.3-1, February 1980, ND = no data.
Uncontrolled CO2, CH4, and N2O emissions are calculated using the emission factors of 73.96 kg/MMBtu, $3*10^{-3}$ kg/MMBtu, and $6*10^{-4}$ kg/MMBtu, respectively, from 40 CFR 98, Tables C-1 and C-2 for distillate fuel oil No. 2. A diesel fuel oil to ammonium nitrate ratio of 9% and a diesel heating value of 19,300 Btu/pound of diesel fuel were used to express the CO2, CH4, and N2O emission factors in terms of lb/ton of ANFO.
2. Based on 1 blast for the worst hourly potential to emit (PTE). However, modeled emission rate will be based on average of 5 blasts in an 8-hour day.
3. Based on 5 blasts per day, for the maximum daily PTE.

Appendix D

CALEEMOD OPERATIONAL EMISSION DATA

Valiano - 2018 Operations (Phase 1 - N 1 & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - Trip rates based on TIA (LLG2015)

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	70.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	90.75	148.50
tblFireplaces	NumberWood	57.75	0.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.98
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	10.98
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	10.98
tblWoodstoves	NumberCatalytic	8.25	0.00
tblWoodstoves	NumberNoncatalytic	8.25	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8212	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Energy	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437
Mobile	6.0417	13.4796	62.4760	0.1623	10.9454	0.1897	11.1351	2.9218	0.1748	3.0966		13,254.0472	13,254.0472	0.5121		13,264.8003
Total	**16.9977**	**14.7908**	**76.6910**	**0.1703**	**10.9454**	**0.5568**	**11.5022**	**2.9218**	**0.5398**	**3.4617**	**0.0000**	**17,893.9577**	**17,893.9577**	**0.6248**	**0.0846**	**17,933.3095**

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	8.7488	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Energy	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
Mobile	6.0417	13.4796	62.4760	0.1623	10.9454	0.1897	11.1351	2.9218	0.1748	3.0966		13,254.0472	13,254.0472	0.5121		13,264.8003
Total	**14.9094**	**14.6543**	**76.6330**	**0.1695**	**10.9454**	**0.5458**	**11.4912**	**2.9218**	**0.5288**	**3.4506**	**0.0000**	**17,719.7744**	**17,719.7744**	**0.6215**	**0.0814**	**17,758.0662**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.29**	**0.92**	**0.08**	**0.51**	**0.00**	**1.98**	**0.10**	**0.00**	**2.04**	**0.32**	**0.00**	**0.97**	**0.97**	**0.53**	**3.77**	**0.98**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	6.0417	13.4796	62.4760	0.1623	10.9454	0.1897	11.1351	2.9218	0.1748	3.0966		13,254.0472	13,254.0472	0.5121		13,264.8003
Mitigated	6.0417	13.4796	62.4760	0.1623	10.9454	0.1897	11.1351	2.9218	0.1748	3.0966		13,254.0472	13,254.0472	0.5121		13,264.8003

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	1,811.70	1,811.70	1811.70	5,172,953	5,172,953
Total	1,811.70	1,811.70	1,811.70	5,172,953	5,172,953

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
NaturalGas Unmitigated	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12500.9	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437
Total		**0.1348**	**1.1520**	**0.4902**	**7.3500e-003**		**0.0931**	**0.0931**		**0.0931**	**0.0931**		**1,470.6933**	**1,470.6933**	**0.0282**	**0.0270**	**1,479.6437**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	11.0203	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
Total		**0.1189**	**1.0156**	**0.4322**	**6.4800e-003**		**0.0821**	**0.0821**		**0.0821**	**0.0821**		**1,296.5100**	**1,296.5100**	**0.0249**	**0.0238**	**1,304.4003**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.8212	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Mitigated	8.7488	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655

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	2.8223					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2883	1.0000e-005	0.0157	0.0000		0.1992	0.1992		0.1971	0.1971	0.0000	3,144.7059	3,144.7059	0.0603	0.0577	3,163.8440
Landscaping	0.4226	0.1591	13.7091	7.2000e-004		0.0748	0.0748		0.0748	0.0748		24.5114	24.5114	0.0243		25.0215
Total	**10.8212**	**0.1591**	**13.7248**	**7.2000e-004**		**0.2740**	**0.2740**		**0.2719**	**0.2719**	**0.0000**	**3,169.2172**	**3,169.2172**	**0.0846**	**0.0577**	**3,188.8655**

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	1.2949					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2883	1.0000e-005	0.0157	0.0000		0.1992	0.1992		0.1971	0.1971	0.0000	3,144.7059	3,144.7059	0.0603	0.0577	3,163.8440
Landscaping	0.4226	0.1591	13.7091	7.2000e-004		0.0748	0.0748		0.0748	0.0748		24.5114	24.5114	0.0243		25.0215
Total	**8.7488**	**0.1591**	**13.7248**	**7.2000e-004**		**0.2740**	**0.2740**		**0.2719**	**0.2719**	**0.0000**	**3,169.2172**	**3,169.2172**	**0.0846**	**0.0577**	**3,188.8655**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2018 Operations (Phase 1 - N 1 & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	165.00	Dwelling Unit	53.57	297,000.00	472

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - Trip rates based on TIA (LLG2015)

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	70.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	90.75	148.50
tblFireplaces	NumberWood	57.75	0.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	10.98
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	10.98
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	10.98
tblWoodstoves	NumberCatalytic	8.25	0.00
tblWoodstoves	NumberNoncatalytic	8.25	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8212	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Energy	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437
Mobile	6.4144	14.3202	65.4033	0.1542	10.9454	0.1904	11.1358	2.9218	0.1755	3.0973		12,617.0364	12,617.0364	0.5124		12,627.7975
Total	**17.3704**	**15.6314**	**79.6183**	**0.1623**	**10.9454**	**0.5576**	**11.5030**	**2.9218**	**0.5405**	**3.4623**	**0.0000**	**17,256.9469**	**17,256.9469**	**0.6252**	**0.0846**	**17,296.3067**

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	8.7488	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Energy	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
Mobile	6.4144	14.3202	65.4033	0.1542	10.9454	0.1904	11.1358	2.9218	0.1755	3.0973		12,617.0364	12,617.0364	0.5124		12,627.7975
Total	**15.2821**	**15.4949**	**79.5602**	**0.1614**	**10.9454**	**0.5465**	**11.4919**	**2.9218**	**0.5295**	**3.4513**	**0.0000**	**17,082.7636**	**17,082.7636**	**0.6219**	**0.0814**	**17,121.0633**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.02**	**0.87**	**0.07**	**0.54**	**0.00**	**1.98**	**0.10**	**0.00**	**2.04**	**0.32**	**0.00**	**1.01**	**1.01**	**0.53**	**3.77**	**1.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	6.4144	14.3202	65.4033	0.1542	10.9454	0.1904	11.1358	2.9218	0.1755	3.0973		12,617.0364	12,617.0364	0.5124		12,627.7975
Mitigated	6.4144	14.3202	65.4033	0.1542	10.9454	0.1904	11.1358	2.9218	0.1755	3.0973		12,617.0364	12,617.0364	0.5124		12,627.7975

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	1,811.70	1,811.70	1811.70	5,172,953	5,172,953
Total	1,811.70	1,811.70	1,811.70	5,172,953	5,172,953

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

4.4 Fleet Mix

Historical Energy Use: N

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
NaturalGas Unmitigated	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12500.9	0.1348	1.1520	0.4902	7.3500e-003		0.0931	0.0931		0.0931	0.0931		1,470.6933	1,470.6933	0.0282	0.0270	1,479.6437
Total		**0.1348**	**1.1520**	**0.4902**	**7.3500e-003**		**0.0931**	**0.0931**		**0.0931**	**0.0931**		**1,470.6933**	**1,470.6933**	**0.0282**	**0.0270**	**1,479.6437**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	11.0203	0.1189	1.0156	0.4322	6.4800e-003		0.0821	0.0821		0.0821	0.0821		1,296.5100	1,296.5100	0.0249	0.0238	1,304.4003
Total		**0.1189**	**1.0156**	**0.4322**	**6.4800e-003**		**0.0821**	**0.0821**		**0.0821**	**0.0821**		**1,296.5100**	**1,296.5100**	**0.0249**	**0.0238**	**1,304.4003**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.8212	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655
Mitigated	8.7488	0.1591	13.7248	7.2000e-004		0.2740	0.2740		0.2719	0.2719	0.0000	3,169.2172	3,169.2172	0.0846	0.0577	3,188.8655

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	2.8223					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2883	1.0000e-005	0.0157	0.0000		0.1992	0.1992		0.1971	0.1971	0.0000	3,144.7059	3,144.7059	0.0603	0.0577	3,163.8440
Landscaping	0.4226	0.1591	13.7091	7.2000e-004		0.0748	0.0748		0.0748	0.0748		24.5114	24.5114	0.0243		25.0215
Total	**10.8212**	**0.1591**	**13.7248**	**7.2000e-004**		**0.2740**	**0.2740**		**0.2719**	**0.2719**	**0.0000**	**3,169.2172**	**3,169.2172**	**0.0846**	**0.0577**	**3,188.8655**

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	1.2949					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2883	1.0000e-005	0.0157	0.0000		0.1992	0.1992		0.1971	0.1971	0.0000	3,144.7059	3,144.7059	0.0603	0.0577	3,163.8440
Landscaping	0.4226	0.1591	13.7091	7.2000e-004		0.0748	0.0748		0.0748	0.0748		24.5114	24.5114	0.0243		25.0215
Total	**8.7488**	**0.1591**	**13.7248**	**7.2000e-004**		**0.2740**	**0.2740**		**0.2719**	**0.2719**	**0.0000**	**3,169.2172**	**3,169.2172**	**0.0846**	**0.0577**	**3,188.8655**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2018 Operations (Phase 1 - N 1 & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

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

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	54.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.28	4.28	4.27	4.38	4.28
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	11.83	11.84	11.85	11.94	11.82	11.82	0.00	11.84	11.84	11.99	11.66	11.84
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	12.25	12.59	19.95	19.55	13.43
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network	0.00			
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.25	25.00	25.00	
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
Yes	Install High Efficiency Lighting	15.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Valiano - 2019 Operations (Phase 2 - N 1, 2, & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	223.00	Dwelling Unit	72.40	401,400.00	638

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	70.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	122.65	200.70
tblFireplaces	NumberWood	78.05	0.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.35
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.35
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.35
tblWoodstoves	NumberCatalytic	11.15	0.00
tblWoodstoves	NumberNoncatalytic	11.15	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.1949	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Energy	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608
Mobile	7.9628	17.4645	81.3951	0.2266	15.2911	0.2572	15.5483	4.0818	0.2372	4.3190		17,941.0272	17,941.0272	0.6738		17,955.1760
Total	**22.3399**	**19.2357**	**100.5679**	**0.2375**	**15.2911**	**0.7535**	**16.0447**	**4.0818**	**0.7308**	**4.8126**	**0.0000**	**24,211.9364**	**24,211.9364**	**0.8258**	**0.1144**	**24,264.7302**

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	11.4186	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Energy	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
Mobile	7.9628	17.4645	81.3951	0.2266	15.2911	0.2572	15.5483	4.0818	0.2372	4.3190		17,941.0272	17,941.0272	0.6738		17,955.1760
Total	**19.5420**	**19.0513**	**100.4894**	**0.2364**	**15.2911**	**0.7386**	**16.0298**	**4.0818**	**0.7158**	**4.7976**	**0.0000**	**23,976.5251**	**23,976.5251**	**0.8213**	**0.1100**	**24,027.8862**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	12.52	0.96	0.08	0.50	0.00	1.98	0.09	0.00	2.04	0.31	0.00	0.97	0.97	0.55	3.78	0.98

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	7.9628	17.4645	81.3951	0.2266	15.2911	0.2572	15.5483	4.0818	0.2372	4.3190		17,941.0272	17,941.0272	0.6738		17,955.1760
Mitigated	7.9628	17.4645	81.3951	0.2266	15.2911	0.2572	15.5483	4.0818	0.2372	4.3190		17,941.0272	17,941.0272	0.6738		17,955.1760

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	2,531.05	2,531.05	2531.05	7,226,916	7,226,916
Total	2,531.05	2,531.05	2,531.05	7,226,916	7,226,916

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
NaturalGas Unmitigated	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	16895.1	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608
Total		**0.1822**	**1.5570**	**0.6626**	**9.9400e-003**		**0.1259**	**0.1259**		**0.1259**	**0.1259**		**1,987.6642**	**1,987.6642**	**0.0381**	**0.0364**	**1,999.7608**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	14.8941	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
Total		**0.1606**	**1.3726**	**0.5841**	**8.7600e-003**		**0.1110**	**0.1110**		**0.1110**	**0.1110**		**1,752.2529**	**1,752.2529**	**0.0336**	**0.0321**	**1,762.9168**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	14.1949	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Mitigated	11.4186	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934

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	3.7172					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3896	2.0000e-005	0.0213	0.0000		0.2692	0.2692		0.2663	0.2663	0.0000	4,250.1177	4,250.1177	0.0815	0.0779	4,275.9832
Landscaping	0.5660	0.2142	18.4890	9.7000e-004		0.1013	0.1013		0.1013	0.1013		33.1274	33.1274	0.0325		33.8103
Total	**14.1949**	**0.2142**	**18.5103**	**9.7000e-004**		**0.3705**	**0.3705**		**0.3677**	**0.3677**	**0.0000**	**4,283.2450**	**4,283.2450**	**0.1140**	**0.0779**	**4,309.7934**

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	1.6528					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8102					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3896	2.0000e-005	0.0213	0.0000		0.2692	0.2692		0.2663	0.2663	0.0000	4,250.1177	4,250.1177	0.0815	0.0779	4,275.9832
Landscaping	0.5660	0.2142	18.4890	9.7000e-004		0.1013	0.1013		0.1013	0.1013		33.1274	33.1274	0.0325		33.8103
Total	**11.4186**	**0.2142**	**18.5103**	**9.7000e-004**		**0.3705**	**0.3705**		**0.3677**	**0.3677**	**0.0000**	**4,283.2450**	**4,283.2450**	**0.1140**	**0.0779**	**4,309.7934**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2019 Operations (Phase 2 - N 1, 2, & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	223.00	Dwelling Unit	72.40	401,400.00	638

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	70.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	122.65	200.70
tblFireplaces	NumberWood	78.05	0.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.35
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.35
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.35
tblWoodstoves	NumberCatalytic	11.15	0.00
tblWoodstoves	NumberNoncatalytic	11.15	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.1949	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Energy	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608
Mobile	8.4396	18.5512	85.2423	0.2153	15.2911	0.2581	15.5492	4.0818	0.2381	4.3199		17,081.8385	17,081.8385	0.6743		17,095.9988
Total	**22.8167**	**20.3224**	**104.4151**	**0.2263**	**15.2911**	**0.7545**	**16.0456**	**4.0818**	**0.7316**	**4.8134**	**0.0000**	**23,352.7478**	**23,352.7478**	**0.8264**	**0.1144**	**23,405.5530**

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	11.4186	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Energy	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
Mobile	8.4396	18.5512	85.2423	0.2153	15.2911	0.2581	15.5492	4.0818	0.2381	4.3199		17,081.8385	17,081.8385	0.6743		17,095.9988
Total	**20.0188**	**20.1380**	**104.3366**	**0.2251**	**15.2911**	**0.7396**	**16.0307**	**4.0818**	**0.7167**	**4.7985**	**0.0000**	**23,117.3365**	**23,117.3365**	**0.8219**	**0.1100**	**23,168.7090**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.26**	**0.91**	**0.08**	**0.52**	**0.00**	**1.98**	**0.09**	**0.00**	**2.04**	**0.31**	**0.00**	**1.01**	**1.01**	**0.55**	**3.78**	**1.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	8.4396	18.5512	85.2423	0.2153	15.2911	0.2581	15.5492	4.0818	0.2381	4.3199		17,081.8385	17,081.8385	0.6743		17,095.9988
Mitigated	8.4396	18.5512	85.2423	0.2153	15.2911	0.2581	15.5492	4.0818	0.2381	4.3199		17,081.8385	17,081.8385	0.6743		17,095.9988

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	2,531.05	2,531.05	2531.05	7,226,916	7,226,916
Total	2,531.05	2,531.05	2,531.05	7,226,916	7,226,916

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
NaturalGas Unmitigated	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	16895.1	0.1822	1.5570	0.6626	9.9400e-003		0.1259	0.1259		0.1259	0.1259		1,987.6642	1,987.6642	0.0381	0.0364	1,999.7608
Total		**0.1822**	**1.5570**	**0.6626**	**9.9400e-003**		**0.1259**	**0.1259**		**0.1259**	**0.1259**		**1,987.6642**	**1,987.6642**	**0.0381**	**0.0364**	**1,999.7608**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	14.8941	0.1606	1.3726	0.5841	8.7600e-003		0.1110	0.1110		0.1110	0.1110		1,752.2529	1,752.2529	0.0336	0.0321	1,762.9168
Total		**0.1606**	**1.3726**	**0.5841**	**8.7600e-003**		**0.1110**	**0.1110**		**0.1110**	**0.1110**		**1,752.2529**	**1,752.2529**	**0.0336**	**0.0321**	**1,762.9168**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	14.1949	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934
Mitigated	11.4186	0.2142	18.5103	9.7000e-004		0.3705	0.3705		0.3677	0.3677	0.0000	4,283.2450	4,283.2450	0.1140	0.0779	4,309.7934

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	3.7172					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3896	2.0000e-005	0.0213	0.0000		0.2692	0.2692		0.2663	0.2663	0.0000	4,250.1177	4,250.1177	0.0815	0.0779	4,275.9832
Landscaping	0.5660	0.2142	18.4890	9.7000e-004		0.1013	0.1013		0.1013	0.1013		33.1274	33.1274	0.0325		33.8103
Total	**14.1949**	**0.2142**	**18.5103**	**9.7000e-004**		**0.3705**	**0.3705**		**0.3677**	**0.3677**	**0.0000**	**4,283.2450**	**4,283.2450**	**0.1140**	**0.0779**	**4,309.7934**

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	1.6528					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.8102					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3896	2.0000e-005	0.0213	0.0000		0.2692	0.2692		0.2663	0.2663	0.0000	4,250.1177	4,250.1177	0.0815	0.0779	4,275.9832
Landscaping	0.5660	0.2142	18.4890	9.7000e-004		0.1013	0.1013		0.1013	0.1013		33.1274	33.1274	0.0325		33.8103
Total	**11.4186**	**0.2142**	**18.5103**	**9.7000e-004**		**0.3705**	**0.3705**		**0.3677**	**0.3677**	**0.0000**	**4,283.2450**	**4,283.2450**	**0.1140**	**0.0779**	**4,309.7934**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2019 Operations (Phase 2 - N 1, 2, & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

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

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	55.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.28	4.28	4.31	4.17	4.28
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	11.85	11.84	11.84	11.60	11.84	11.84	0.00	11.84	11.84	11.89	11.77	11.84
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	12.44	12.77	19.95	19.57	13.60
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.08	0.28		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network	0.00			
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.25	25.00	25.00	
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
Yes	Install High Efficiency Lighting	15.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Valiano - 2019 Operations (Phase 3 - N 1-3 & 5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	258.00	Dwelling Unit	83.77	464,400.00	738

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	100.00	0.00
tblFireplaces	NumberGas	141.90	232.20
tblFireplaces	NumberWood	90.30	0.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.69
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.69
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.69
tblWoodstoves	NumberCatalytic	12.90	0.00
tblWoodstoves	NumberNoncatalytic	12.90	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.2331	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Energy	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246
Mobile	9.4885	20.8109	96.9911	0.2701	18.2210	0.3064	18.5275	4.8639	0.2827	5.1466		21,378.6755	21,378.6755	0.8029		21,395.5354
Total	**25.9324**	**22.8600**	**119.1730**	**0.2827**	**18.2210**	**0.8807**	**19.1017**	**4.8639**	**0.8537**	**5.7176**	**0.0000**	**28,633.8082**	**28,633.8082**	**0.9788**	**0.1323**	**28,695.3784**

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	13.0320	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Energy	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
Mobile	9.4885	20.8109	96.9911	0.2701	18.2210	0.3064	18.5275	4.8639	0.2827	5.1466		21,378.6755	21,378.6755	0.8029		21,395.5354
Total	**22.7063**	**22.6467**	**119.0823**	**0.2813**	**18.2210**	**0.8635**	**19.0845**	**4.8639**	**0.8364**	**5.7003**	**0.0000**	**28,361.4489**	**28,361.4489**	**0.9736**	**0.1273**	**28,421.3615**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.44**	**0.93**	**0.08**	**0.48**	**0.00**	**1.96**	**0.09**	**0.00**	**2.02**	**0.30**	**0.00**	**0.95**	**0.95**	**0.53**	**3.77**	**0.95**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	9.4885	20.8109	96.9911	0.2701	18.2210	0.3064	18.5275	4.8639	0.2827	5.1466		21,378.6755	21,378.6755	0.8029		21,395.5354
Mitigated	9.4885	20.8109	96.9911	0.2701	18.2210	0.3064	18.5275	4.8639	0.2827	5.1466		21,378.6755	21,378.6755	0.8029		21,395.5354

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	3,016.02	3,016.02	3016.02	8,611,652	8,611,652
Total	3,016.02	3,016.02	3,016.02	8,611,652	8,611,652

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
NaturalGas Unmitigated	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19546.9	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246
Total		**0.2108**	**1.8014**	**0.7665**	**0.0115**		**0.1456**	**0.1456**		**0.1456**	**0.1456**		**2,299.6295**	**2,299.6295**	**0.0441**	**0.0422**	**2,313.6246**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	17.2318	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
Total		**0.1858**	**1.5880**	**0.6758**	**0.0101**		**0.1284**	**0.1284**		**0.1284**	**0.1284**		**2,027.2702**	**2,027.2702**	**0.0389**	**0.0372**	**2,039.6078**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	16.2331	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Mitigated	13.0320	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183

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	4.2572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4507	2.0000e-005	0.0246	0.0000		0.3114	0.3114		0.3081	0.3081	0.0000	4,917.1765	4,917.1765	0.0943	0.0902	4,947.1016
Landscaping	0.6548	0.2478	21.3909	1.1200e-003		0.1172	0.1172		0.1172	0.1172		38.3267	38.3267	0.0376		39.1168
Total	**16.2331**	**0.2478**	**21.4154**	**1.1200e-003**		**0.4286**	**0.4286**		**0.4254**	**0.4254**	**0.0000**	**4,955.5032**	**4,955.5032**	**0.1319**	**0.0902**	**4,986.2183**

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	1.8688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.0576					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4507	2.0000e-005	0.0246	0.0000		0.3114	0.3114		0.3081	0.3081	0.0000	4,917.1765	4,917.1765	0.0943	0.0902	4,947.1016
Landscaping	0.6548	0.2478	21.3909	1.1200e-003		0.1172	0.1172		0.1172	0.1172		38.3267	38.3267	0.0376		39.1168
Total	**13.0320**	**0.2478**	**21.4154**	**1.1200e-003**		**0.4286**	**0.4286**		**0.4254**	**0.4254**	**0.0000**	**4,955.5032**	**4,955.5032**	**0.1319**	**0.0902**	**4,986.2183**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2019 Operations (Phase 3 - N 1-3 & 5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.00	Acre	1.00	43,560.00	0
Single Family Housing	258.00	Dwelling Unit	83.77	464,400.00	738

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	100.00	0.00
tblFireplaces	NumberGas	141.90	232.20
tblFireplaces	NumberWood	90.30	0.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.69
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.69
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.69
tblWoodstoves	NumberCatalytic	12.90	0.00
tblWoodstoves	NumberNoncatalytic	12.90	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.2331	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Energy	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246
Mobile	10.0567	22.1058	101.5754	0.2566	18.2210	0.3076	18.5286	4.8639	0.2837	5.1476		20,354.8593	20,354.8593	0.8035		20,371.7328
Total	**26.5006**	**24.1550**	**123.7574**	**0.2692**	**18.2210**	**0.8818**	**19.1029**	**4.8639**	**0.8547**	**5.7186**	**0.0000**	**27,609.9920**	**27,609.9920**	**0.9795**	**0.1323**	**27,671.5757**

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	13.0320	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Energy	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
Mobile	10.0567	22.1058	101.5754	0.2566	18.2210	0.3076	18.5286	4.8639	0.2837	5.1476		20,354.8593	20,354.8593	0.8035		20,371.7328
Total	**23.2745**	**23.9416**	**123.6666**	**0.2679**	**18.2210**	**0.8646**	**19.0856**	**4.8639**	**0.8374**	**5.7013**	**0.0000**	**27,337.6327**	**27,337.6327**	**0.9742**	**0.1273**	**27,397.5589**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.17**	**0.88**	**0.07**	**0.51**	**0.00**	**1.96**	**0.09**	**0.00**	**2.02**	**0.30**	**0.00**	**0.99**	**0.99**	**0.53**	**3.77**	**0.99**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.0567	22.1058	101.5754	0.2566	18.2210	0.3076	18.5286	4.8639	0.2837	5.1476		20,354.8593	20,354.8593	0.8035		20,371.7328
Mitigated	10.0567	22.1058	101.5754	0.2566	18.2210	0.3076	18.5286	4.8639	0.2837	5.1476		20,354.8593	20,354.8593	0.8035		20,371.7328

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	3,016.02	3,016.02	3016.02	8,611,652	8,611,652
Total	3,016.02	3,016.02	3,016.02	8,611,652	8,611,652

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512639	0.073513	0.191470	0.131122	0.036200	0.005158	0.012615	0.022741	0.001866	0.002067	0.006563	0.000594	0.003452

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
NaturalGas Unmitigated	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19546.9	0.2108	1.8014	0.7665	0.0115		0.1456	0.1456		0.1456	0.1456		2,299.6295	2,299.6295	0.0441	0.0422	2,313.6246
Total		**0.2108**	**1.8014**	**0.7665**	**0.0115**		**0.1456**	**0.1456**		**0.1456**	**0.1456**		**2,299.6295**	**2,299.6295**	**0.0441**	**0.0422**	**2,313.6246**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	17.2318	0.1858	1.5880	0.6758	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.2702	2,027.2702	0.0389	0.0372	2,039.6078
Total		**0.1858**	**1.5880**	**0.6758**	**0.0101**		**0.1284**	**0.1284**		**0.1284**	**0.1284**		**2,027.2702**	**2,027.2702**	**0.0389**	**0.0372**	**2,039.6078**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	16.2331	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183
Mitigated	13.0320	0.2478	21.4154	1.1200e-003		0.4286	0.4286		0.4254	0.4254	0.0000	4,955.5032	4,955.5032	0.1319	0.0902	4,986.2183

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	4.2572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4507	2.0000e-005	0.0246	0.0000		0.3114	0.3114		0.3081	0.3081	0.0000	4,917.1765	4,917.1765	0.0943	0.0902	4,947.1016
Landscaping	0.6548	0.2478	21.3909	1.1200e-003		0.1172	0.1172		0.1172	0.1172		38.3267	38.3267	0.0376		39.1168
Total	**16.2331**	**0.2478**	**21.4154**	**1.1200e-003**		**0.4286**	**0.4286**		**0.4254**	**0.4254**	**0.0000**	**4,955.5032**	**4,955.5032**	**0.1319**	**0.0902**	**4,986.2183**

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	1.8688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.0576					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4507	2.0000e-005	0.0246	0.0000		0.3114	0.3114		0.3081	0.3081	0.0000	4,917.1765	4,917.1765	0.0943	0.0902	4,947.1016
Landscaping	0.6548	0.2478	21.3909	1.1200e-003		0.1172	0.1172		0.1172	0.1172		38.3267	38.3267	0.0376		39.1168
Total	**13.0320**	**0.2478**	**21.4154**	**1.1200e-003**		**0.4286**	**0.4286**		**0.4254**	**0.4254**	**0.0000**	**4,955.5032**	**4,955.5032**	**0.1319**	**0.0902**	**4,986.2183**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2019 Operations (Phase 3 - N 1-3 & 5)

San Diego County, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

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

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	56.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.28	4.28	4.30	4.20	4.28
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	11.85	11.84	11.84	11.90	11.85	11.85	0.00	11.84	11.84	11.92	11.89	11.84
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	12.51	12.85	19.95	19.58	13.67
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.07	0.27		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network	0.00			
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.25	25.00	25.00	
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
Yes	Install High Efficiency Lighting	15.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Valiano - 2020 Operations (Phase 4 - N 1-5)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	3.50	Acre	3.50	152,460.00	0
Single Family Housing	334.00	Dwelling Unit	108.44	601,200.00	955

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations Only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	200.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	183.70	300.60
tblFireplaces	NumberWood	116.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.31
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.31
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.31
tblWoodstoves	NumberCatalytic	16.70	0.00
tblWoodstoves	NumberNoncatalytic	16.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.6750	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Energy	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575
Mobile	11.3649	23.6593	114.8999	0.3382	22.8212	0.3707	23.1920	6.0917	0.3421	6.4338		25,822.1236	25,822.1236	0.9564		25,842.2079
Total	**35.3128**	**26.3111**	**143.5714**	**0.3545**	**22.8212**	**1.1145**	**23.9357**	**6.0917**	**1.0816**	**7.1733**	**0.0000**	**35,214.4276**	**35,214.4276**	**1.1839**	**0.1713**	**35,292.3860**

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	19.3772	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Energy	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
Mobile	11.3649	23.6593	114.8999	0.3382	22.8212	0.3707	23.1920	6.0917	0.3421	6.4338		25,822.1236	25,822.1236	0.9564		25,842.2079
Total	**30.9827**	**26.0349**	**143.4539**	**0.3528**	**22.8212**	**1.0921**	**23.9134**	**6.0917**	**1.0593**	**7.1510**	**0.0000**	**34,861.8384**	**34,861.8384**	**1.1771**	**0.1648**	**34,937.6510**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.26**	**1.05**	**0.08**	**0.50**	**0.00**	**2.00**	**0.09**	**0.00**	**2.06**	**0.31**	**0.00**	**1.00**	**1.00**	**0.57**	**3.78**	**1.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	11.3649	23.6593	114.8999	0.3382	22.8212	0.3707	23.1920	6.0917	0.3421	6.4338		25,822.1236	25,822.1236	0.9564		25,842.2079
Mitigated	11.3649	23.6593	114.8999	0.3382	22.8212	0.3707	23.1920	6.0917	0.3421	6.4338		25,822.1236	25,822.1236	0.9564		25,842.2079

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	3,777.54	3,777.54	3777.54	10,786,023	10,786,023
Total	3,777.54	3,777.54	3,777.54	10,786,023	10,786,023

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
NaturalGas Unmitigated	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	25304.8	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575
Total		**0.2729**	**2.3320**	**0.9924**	**0.0149**		**0.1886**	**0.1886**		**0.1886**	**0.1886**		**2,977.0397**	**2,977.0397**	**0.0571**	**0.0546**	**2,995.1575**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	22.3078	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
Total		**0.2406**	**2.0558**	**0.8748**	**0.0131**		**0.1662**	**0.1662**		**0.1662**	**0.1662**		**2,624.4505**	**2,624.4505**	**0.0503**	**0.0481**	**2,640.4225**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	23.6750	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Mitigated	19.3772	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206

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	6.1213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5835	3.0000e-005	0.0318	0.0000		0.4032	0.4032		0.3989	0.3989	0.0000	6,365.6471	6,365.6471	0.1220	0.1167	6,404.3873
Landscaping	0.8419	0.3198	27.6474	1.4600e-003		0.1520	0.1520		0.1520	0.1520		49.6173	49.6173	0.0484		50.6333
Total	**23.6750**	**0.3198**	**27.6792**	**1.4600e-003**		**0.5552**	**0.5552**		**0.5509**	**0.5509**	**0.0000**	**6,415.2643**	**6,415.2643**	**0.1704**	**0.1167**	**6,455.0206**

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	3.0293					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.9225					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5835	3.0000e-005	0.0318	0.0000		0.4032	0.4032		0.3989	0.3989	0.0000	6,365.6471	6,365.6471	0.1220	0.1167	6,404.3873
Landscaping	0.8419	0.3198	27.6474	1.4600e-003		0.1520	0.1520		0.1520	0.1520		49.6173	49.6173	0.0484		50.6333
Total	**19.3772**	**0.3198**	**27.6792**	**1.4600e-003**		**0.5552**	**0.5552**		**0.5509**	**0.5509**	**0.0000**	**6,415.2643**	**6,415.2643**	**0.1704**	**0.1167**	**6,455.0206**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2020 Operations (Phase 4 - N 1-5)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	3.50	Acre	3.50	152,460.00	0
Single Family Housing	334.00	Dwelling Unit	108.44	601,200.00	955

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operations Only

Vehicle Trips - LLG 2015

Woodstoves - No woodburning hearths

Mobile Land Use Mitigation -

Area Mitigation - Rule 67

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	200.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	183.70	300.60
tblFireplaces	NumberWood	116.90	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	10.08	11.31
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	SU_TR	8.77	11.31
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	9.57	11.31
tblWoodstoves	NumberCatalytic	16.70	0.00
tblWoodstoves	NumberNoncatalytic	16.70	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.6750	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Energy	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575
Mobile	12.0325	25.1533	120.4083	0.3213	22.8212	0.3720	23.1932	6.0917	0.3432	6.4350		24,589.5419	24,589.5419	0.9572		24,609.6439
Total	**35.9804**	**27.8051**	**149.0799**	**0.3377**	**22.8212**	**1.1157**	**23.9369**	**6.0917**	**1.0827**	**7.1745**	**0.0000**	**33,981.8459**	**33,981.8459**	**1.1847**	**0.1713**	**34,059.8220**

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	19.3772	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Energy	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
Mobile	12.0325	25.1533	120.4083	0.3213	22.8212	0.3720	23.1932	6.0917	0.3432	6.4350		24,589.5419	24,589.5419	0.9572		24,609.6439
Total	**31.6502**	**27.5289**	**148.9623**	**0.3359**	**22.8212**	**1.0934**	**23.9146**	**6.0917**	**1.0604**	**7.1521**	**0.0000**	**33,629.2567**	**33,629.2567**	**1.1779**	**0.1648**	**33,705.0870**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	12.03	0.99	0.08	0.52	0.00	2.00	0.09	0.00	2.06	0.31	0.00	1.04	1.04	0.57	3.78	1.04

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	12.0325	25.1533	120.4083	0.3213	22.8212	0.3720	23.1932	6.0917	0.3432	6.4350		24,589.5419	24,589.5419	0.9572		24,609.6439
Mitigated	12.0325	25.1533	120.4083	0.3213	22.8212	0.3720	23.1932	6.0917	0.3432	6.4350		24,589.5419	24,589.5419	0.9572		24,609.6439

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	3,777.54	3,777.54	3777.54	10,786,023	10,786,023
Total	3,777.54	3,777.54	3,777.54	10,786,023	10,786,023

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
NaturalGas Unmitigated	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	25304.8	0.2729	2.3320	0.9924	0.0149		0.1886	0.1886		0.1886	0.1886		2,977.0397	2,977.0397	0.0571	0.0546	2,995.1575
Total		**0.2729**	**2.3320**	**0.9924**	**0.0149**		**0.1886**	**0.1886**		**0.1886**	**0.1886**		**2,977.0397**	**2,977.0397**	**0.0571**	**0.0546**	**2,995.1575**

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	22.3078	0.2406	2.0558	0.8748	0.0131		0.1662	0.1662		0.1662	0.1662		2,624.4505	2,624.4505	0.0503	0.0481	2,640.4225
Total		**0.2406**	**2.0558**	**0.8748**	**0.0131**		**0.1662**	**0.1662**		**0.1662**	**0.1662**		**2,624.4505**	**2,624.4505**	**0.0503**	**0.0481**	**2,640.4225**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	23.6750	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206
Mitigated	19.3772	0.3198	27.6792	1.4600e-003		0.5552	0.5552		0.5509	0.5509	0.0000	6,415.2643	6,415.2643	0.1704	0.1167	6,455.0206

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	6.1213					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5835	3.0000e-005	0.0318	0.0000		0.4032	0.4032		0.3989	0.3989	0.0000	6,365.6471	6,365.6471	0.1220	0.1167	6,404.3873
Landscaping	0.8419	0.3198	27.6474	1.4600e-003		0.1520	0.1520		0.1520	0.1520		49.6173	49.6173	0.0484		50.6333
Total	**23.6750**	**0.3198**	**27.6792**	**1.4600e-003**		**0.5552**	**0.5552**		**0.5509**	**0.5509**	**0.0000**	**6,415.2643**	**6,415.2643**	**0.1704**	**0.1167**	**6,455.0206**

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	3.0293					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.9225					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5835	3.0000e-005	0.0318	0.0000		0.4032	0.4032		0.3989	0.3989	0.0000	6,365.6471	6,365.6471	0.1220	0.1167	6,404.3873
Landscaping	0.8419	0.3198	27.6474	1.4600e-003		0.1520	0.1520		0.1520	0.1520		49.6173	49.6173	0.0484		50.6333
Total	**19.3772**	**0.3198**	**27.6792**	**1.4600e-003**		**0.5552**	**0.5552**		**0.5509**	**0.5509**	**0.0000**	**6,415.2643**	**6,415.2643**	**0.1704**	**0.1167**	**6,455.0206**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

10.0 Vegetation

Valiano - 2020 Operations (Phase 4 - N 1-5)

San Diego County, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

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

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	50.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.28	4.28	4.28	4.32	4.28
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	11.85	11.84	11.84	12.13	11.86	11.86	0.00	11.84	11.84	11.85	11.84	11.84
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	11.75	12.10	19.94	19.55	12.96
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.14	0.38		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network	0.00			
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.25	25.00	25.00	
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
Yes	Install High Efficiency Lighting	15.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Valiano - Wastewater Treatment and Water Reclamation Facility (WTWRF)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	21.60	1000sqft	0.50	21,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Concurrent with backbone infrastructure of Phase 1 (neighborhoods 1 and 5).

Land Use - The perimeter of the WTWRF is 120 ft by 180 ft = 21,600sf.

Construction Phase - Construction activities are to begin during backbone infrastructure of Phase 1 (Neighborhoods 1 and 5).

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Equestrian Facility

Architectural Coating - Most of the WTWRF footprint would not be structures requiring paint. Therefore, one-quarter of the CalEEMod defaults for sqft were used.

Vehicle Trips - ADT obtained from LLG (10 trips per day). 10 ADT / 21.6 1000sqft = 0.463 trips/1000sqft/day

Woodstoves -

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - Two on-site generators would be required (one for the WTWRF and one for the fire pump station).

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	10,800.00	2,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	32,400.00	8,100.00
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	1.32	0.46
tblVehicleTrips	SU_TR	0.68	0.46
tblVehicleTrips	WD_TR	6.97	0.46

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	25.4045	14.1219	10.9725	0.0199	2.2340	0.9461	3.0733	0.4356	0.8704	1.2035	0.0000	1,966.3102	1,966.3102	0.3602	0.0000	1,973.8733
Total	**25.4045**	**14.1219**	**10.9725**	**0.0199**	**2.2340**	**0.9461**	**3.0733**	**0.4356**	**0.8704**	**1.2035**	**0.0000**	**1,966.3102**	**1,966.3102**	**0.3602**	**0.0000**	**1,973.8733**

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					
2016	25.0657	3.0812	10.1342	0.0199	1.1377	0.0443	1.1820	0.2080	0.0415	0.2425	0.0000	1,966.3102	1,966.3102	0.3602	0.0000	1,973.8733
Total	**25.0657**	**3.0812**	**10.1342**	**0.0199**	**1.1377**	**0.0443**	**1.1820**	**0.2080**	**0.0415**	**0.2425**	**0.0000**	**1,966.3102**	**1,966.3102**	**0.3602**	**0.0000**	**1,973.8733**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**1.33**	**78.18**	**7.64**	**0.00**	**49.07**	**95.31**	**61.54**	**52.25**	**95.23**	**79.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Energy	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830
Mobile	0.0334	0.0753	0.3485	9.1000e-004	0.0614	1.0600e-003	0.0624	0.0164	9.8000e-004	0.0174		74.2795	74.2795	2.8700e-003		74.3396
Offroad	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.6513**	**8.3705**	**7.9026**	**0.0145**	**0.0614**	**0.5303**	**0.5917**	**0.0164**	**0.5302**	**0.5466**		**1,402.4368**	**1,402.4368**	**0.0944**	**1.5000e-003**	**1,404.8846**

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	lb/day										lb/day					
Area	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Energy	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
Mobile	0.0334	0.0753	0.3485	9.1000e-004	0.0614	1.0600e-003	0.0624	0.0164	9.8000e-004	0.0174		74.2795	74.2795	2.8700e-003		74.3396
Offroad	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.6509**	**8.3665**	**7.8993**	**0.0145**	**0.0614**	**0.5300**	**0.5914**	**0.0164**	**0.5299**	**0.5463**		**1,397.6956**	**1,397.6956**	**0.0943**	**1.4200e-003**	**1,400.1146**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**61.24**	**98.33**	**94.88**	**91.02**	**0.00**	**98.87**	**88.62**	**0.00**	**98.89**	**95.93**	**0.00**	**89.19**	**89.19**	**95.38**	**5.33**	**89.17**

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	7/6/2016	7/19/2016	5	10	
2	Site Preparation	Site Preparation	7/20/2016	7/20/2016	5	1	
3	Grading	Grading	7/21/2016	7/22/2016	5	2	
4	Building Construction	Building Construction	7/23/2016	12/9/2016	5	100	
5	Paving	Paving	12/10/2016	12/16/2016	5	5	
6	Architectural Coating	Architectural Coating	12/17/2016	12/23/2016	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,100; Non-Residential Outdoor: 2,700 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Demolition - 2016

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					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**	**1.9933**	**0.8039**	**2.7972**	**0.3019**	**0.7674**	**1.0692**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.2 Demolition - 2016

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	0.1784	2.5501	1.8204	6.8100e-003	0.1586	0.0348	0.1934	0.0434	0.0321	0.0755		685.8464	685.8464	4.8800e-003		685.9489
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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.2133**	**2.5912**	**2.2678**	**7.8500e-003**	**0.2407**	**0.0355**	**0.2762**	**0.0652**	**0.0326**	**0.0978**		**772.6996**	**772.6996**	**9.2300e-003**		**772.8935**

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					0.8970	0.0000	0.8970	0.1358	0.0000	0.1358			0.0000			0.0000
Off-Road	0.1330	0.4900	7.8665	0.0120		8.8700e-003	8.8700e-003		8.8700e-003	8.8700e-003	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**0.1330**	**0.4900**	**7.8665**	**0.0120**	**0.8970**	**8.8700e-003**	**0.9058**	**0.1358**	**8.8700e-003**	**0.1447**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.2 Demolition - 2016

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	0.1784	2.5501	1.8204	6.8100e-003	0.1586	0.0348	0.1934	0.0434	0.0321	0.0755		685.8464	685.8464	4.8800e-003		685.9489
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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.2133**	**2.5912**	**2.2678**	**7.8500e-003**	**0.2407**	**0.0355**	**0.2762**	**0.0652**	**0.0326**	**0.0978**		**772.6996**	**772.6996**	**9.2300e-003**		**772.8935**

3.3 Site Preparation - 2016

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.3593	13.6350	7.3401	9.3500e-003		0.8338	0.8338		0.7671	0.7671		973.0842	973.0842	0.2935		979.2481
Total	**1.3593**	**13.6350**	**7.3401**	**9.3500e-003**	**0.5303**	**0.8338**	**1.3640**	**0.0573**	**0.7671**	**0.8243**		**973.0842**	**973.0842**	**0.2935**		**979.2481**

3.3 Site Preparation - 2016

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	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	**0.0175**	**0.0205**	**0.2237**	**5.2000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**43.4266**	**43.4266**	**2.1800e-003**		**43.4723**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.1135	0.4180	6.9975	9.3500e-003		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003	0.0000	973.0842	973.0842	0.2935		979.2481
Total	**0.1135**	**0.4180**	**6.9975**	**9.3500e-003**	**0.2386**	**7.5600e-003**	**0.2462**	**0.0258**	**7.5600e-003**	**0.0333**	**0.0000**	**973.0842**	**973.0842**	**0.2935**		**979.2481**

3.3 Site Preparation - 2016

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	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	**0.0175**	**0.0205**	**0.2237**	**5.2000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**43.4266**	**43.4266**	**2.1800e-003**		**43.4723**

3.4 Grading - 2016

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**	**0.7528**	**0.8039**	**1.5566**	**0.4138**	**0.7674**	**1.1811**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.4 Grading - 2016

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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.1330	0.4900	7.8665	0.0120		8.8700e-003	8.8700e-003		8.8700e-003	8.8700e-003	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**0.1330**	**0.4900**	**7.8665**	**0.0120**	**0.3387**	**8.8700e-003**	**0.3476**	**0.1862**	**8.8700e-003**	**0.1951**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.4 Grading - 2016

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	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.5 Building Construction - 2016

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	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0315	0.0369	0.4026	9.4000e-004	0.0739	5.5000e-004	0.0745	0.0196	5.1000e-004	0.0201		78.1679	78.1679	3.9200e-003		78.2501
Total	**0.0732**	**0.4160**	**0.8476**	**1.8900e-003**	**0.1005**	**6.2800e-003**	**0.1068**	**0.0272**	**5.7800e-003**	**0.0330**		**173.6033**	**173.6033**	**4.6600e-003**		**173.7010**

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	0.1389	0.5116	7.6980	0.0113		9.2600e-003	9.2600e-003		9.2600e-003	9.2600e-003	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**0.1389**	**0.5116**	**7.6980**	**0.0113**		**9.2600e-003**	**9.2600e-003**		**9.2600e-003**	**9.2600e-003**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.5 Building Construction - 2016

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	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0315	0.0369	0.4026	9.4000e-004	0.0739	5.5000e-004	0.0745	0.0196	5.1000e-004	0.0201		78.1679	78.1679	3.9200e-003		78.2501
Total	**0.0732**	**0.4160**	**0.8476**	**1.8900e-003**	**0.1005**	**6.2800e-003**	**0.1068**	**0.0272**	**5.7800e-003**	**0.0330**		**173.6033**	**173.6033**	**4.6600e-003**		**173.7010**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1203	10.6282	7.2935	0.0111		0.6606	0.6606		0.6113	0.6113		1,083.5832	1,083.5832	0.2969		1,089.8175
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1203**	**10.6282**	**7.2935**	**0.0111**		**0.6606**	**0.6606**		**0.6113**	**0.6113**		**1,083.5832**	**1,083.5832**	**0.2969**		**1,089.8175**

3.6 Paving - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

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	0.1100	0.4051	6.7829	0.0111		7.3300e-003	7.3300e-003		7.3300e-003	7.3300e-003	0.0000	1,083.5832	1,083.5832	0.2969		1,089.8175
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1100**	**0.4051**	**6.7829**	**0.0111**		**7.3300e-003**	**7.3300e-003**		**7.3300e-003**	**7.3300e-003**	**0.0000**	**1,083.5832**	**1,083.5832**	**0.2969**		**1,089.8175**

3.6 Paving - 2016

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	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.0629**	**0.0738**	**0.8053**	**1.8700e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**156.3358**	**156.3358**	**7.8300e-003**		**156.5002**

3.7 Architectural Coating - 2016

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	25.0290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**25.3975**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

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	6.9900e-003	8.2000e-003	0.0895	2.1000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		17.3706	17.3706	8.7000e-004		17.3889
Total	**6.9900e-003**	**8.2000e-003**	**0.0895**	**2.1000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**17.3706**	**17.3706**	**8.7000e-004**		**17.3889**

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	25.0290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**25.0587**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

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	6.9900e-003	8.2000e-003	0.0895	2.1000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		17.3706	17.3706	8.7000e-004		17.3889
Total	**6.9900e-003**	**8.2000e-003**	**0.0895**	**2.1000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**17.3706**	**17.3706**	**8.7000e-004**		**17.3889**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0334	0.0753	0.3485	9.1000e-004	0.0614	1.0600e-003	0.0624	0.0164	9.8000e-004	0.0174		74.2795	74.2795	2.8700e-003		74.3396
Unmitigated	0.0334	0.0753	0.3485	9.1000e-004	0.0614	1.0600e-003	0.0624	0.0164	9.8000e-004	0.0174		74.2795	74.2795	2.8700e-003		74.3396

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	9.94	9.94	9.94	29,008	29,008
Total	9.94	9.94	9.94	29,008	29,008

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
NaturalGas Unmitigated	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830

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					
General Light Industry	697.71	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830
Total		**7.5200e-003**	**0.0684**	**0.0575**	**4.1000e-004**		**5.2000e-003**	**5.2000e-003**		**5.2000e-003**	**5.2000e-003**		**82.0835**	**82.0835**	**1.5700e-003**	**1.5000e-003**	**82.5830**

5.2 Energy by Land Use - NaturalGas

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					
General Light Industry	0.657409	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
Total		**7.0900e-003**	**0.0645**	**0.0541**	**3.9000e-004**		**4.9000e-003**	**4.9000e-003**		**4.9000e-003**	**4.9000e-003**		**77.3423**	**77.3423**	**1.4800e-003**	**1.4200e-003**	**77.8130**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Unmitigated	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-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	lb/day										lb/day					
Architectural Coating	0.1372					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Total	**0.5996**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7300e-003**	**4.7300e-003**	**1.0000e-005**		**5.0000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1372					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Total	**0.5996**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7300e-003**	**4.7300e-003**	**1.0000e-005**		**5.0000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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
Generator Sets	2	8.00	260	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.0108**	**8.2268**	**7.4944**	**0.0132**		**0.5240**	**0.5240**		**0.5240**	**0.5240**		**1,246.0691**	**1,246.0691**	**0.0899**		**1,247.9570**

10.0 Vegetation

Valiano - Wastewater Treatment and Water Reclamation Facility (WTWRF)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	21.60	1000sqft	0.50	21,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Concurrent with backbone infrastructure of Phase 1 (neighborhoods 1 and 5).

Land Use - The perimeter of the WTWRF is 120 ft by 180 ft = 21,600sf.

Construction Phase - Construction activities are to begin during backbone infrastructure of Phase 1 (Neighborhoods 1 and 5).

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Equestrian Facility

Architectural Coating - Most of the WTWRF footprint would not be structures requiring paint. Therefore, one-quarter of the CalEEMod defaults for sqft were used.

Vehicle Trips - ADT obtained from LLG (10 trips per day). 10 ADT / 21.6 1000sqft = 0.463 trips/1000sqft/day

Woodstoves -

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 Engines, level 2 DPF, and 15% oxidation catalyst.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - Two on-site generators would be required (one for the WTWRF and one for the fire pump station).

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	10,800.00	2,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	32,400.00	8,100.00
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00

tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	OxidationCatalyst	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	1.32	0.46
tblVehicleTrips	SU_TR	0.68	0.46
tblVehicleTrips	WD_TR	6.97	0.46

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	25.4049	14.1355	11.4911	0.0198	2.2340	0.9462	3.0734	0.4356	0.8705	1.2035	0.0000	1,959.4156	1,959.4156	0.3602	0.0000	1,966.9791
Total	**25.4049**	**14.1355**	**11.4911**	**0.0198**	**2.2340**	**0.9462**	**3.0734**	**0.4356**	**0.8705**	**1.2035**	**0.0000**	**1,959.4156**	**1,959.4156**	**0.3602**	**0.0000**	**1,966.9791**

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					
2016	25.0661	3.1684	10.6528	0.0198	1.1377	0.0444	1.1821	0.2080	0.0416	0.2426	0.0000	1,959.4156	1,959.4156	0.3602	0.0000	1,966.9791
Total	**25.0661**	**3.1684**	**10.6528**	**0.0198**	**1.1377**	**0.0444**	**1.1821**	**0.2080**	**0.0416**	**0.2426**	**0.0000**	**1,959.4156**	**1,959.4156**	**0.3602**	**0.0000**	**1,966.9791**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**1.33**	**77.59**	**7.30**	**0.00**	**49.07**	**95.30**	**61.54**	**52.25**	**95.22**	**79.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Energy	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830
Mobile	0.0354	0.0800	0.3641	8.6000e-004	0.0614	1.0700e-003	0.0624	0.0164	9.8000e-004	0.0174		70.7088	70.7088	2.8700e-003		70.7690
Offroad	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.6534**	**8.3752**	**7.9182**	**0.0144**	**0.0614**	**0.5303**	**0.5917**	**0.0164**	**0.5302**	**0.5466**		**1,398.8661**	**1,398.8661**	**0.0944**	**1.5000e-003**	**1,401.3140**

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	lb/day										lb/day					
Area	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Energy	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
Mobile	0.0354	0.0800	0.3641	8.6000e-004	0.0614	1.0700e-003	0.0624	0.0164	9.8000e-004	0.0174		70.7088	70.7088	2.8700e-003		70.7690
Offroad	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.6529**	**8.3713**	**7.9149**	**0.0144**	**0.0614**	**0.5300**	**0.5914**	**0.0164**	**0.5299**	**0.5463**		**1,394.1249**	**1,394.1249**	**0.0943**	**1.4200e-003**	**1,396.5439**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**61.16**	**98.27**	**94.69**	**91.34**	**0.00**	**98.87**	**88.62**	**0.00**	**98.89**	**95.92**	**0.00**	**89.42**	**89.42**	**95.38**	**5.33**	**89.40**

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	7/6/2016	7/19/2016	5	10	
2	Site Preparation	Site Preparation	7/20/2016	7/20/2016	5	1	
3	Grading	Grading	7/21/2016	7/22/2016	5	2	
4	Building Construction	Building Construction	7/23/2016	12/9/2016	5	100	
5	Paving	Paving	12/10/2016	12/16/2016	5	5	
6	Architectural Coating	Architectural Coating	12/17/2016	12/23/2016	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,100; Non-Residential Outdoor: 2,700 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Oxidation Catalyst for Construction Equipment

Water Exposed Area

3.2 Demolition - 2016

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					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**	**1.9933**	**0.8039**	**2.7972**	**0.3019**	**0.7674**	**1.0692**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.2 Demolition - 2016

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	0.1985	2.6324	2.3517	6.8000e-003	0.1586	0.0349	0.1935	0.0434	0.0321	0.0756		684.2379	684.2379	4.9400e-003		684.3417
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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.2356**	**2.6784**	**2.7864**	**7.7800e-003**	**0.2407**	**0.0356**	**0.2763**	**0.0652**	**0.0327**	**0.0979**		**765.8050**	**765.8050**	**9.2900e-003**		**766.0002**

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					0.8970	0.0000	0.8970	0.1358	0.0000	0.1358			0.0000			0.0000
Off-Road	0.1330	0.4900	7.8665	0.0120		8.8700e-003	8.8700e-003		8.8700e-003	8.8700e-003	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**0.1330**	**0.4900**	**7.8665**	**0.0120**	**0.8970**	**8.8700e-003**	**0.9058**	**0.1358**	**8.8700e-003**	**0.1447**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.2 Demolition - 2016

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	0.1985	2.6324	2.3517	6.8000e-003	0.1586	0.0349	0.1935	0.0434	0.0321	0.0756		684.2379	684.2379	4.9400e-003		684.3417
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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.2356**	**2.6784**	**2.7864**	**7.7800e-003**	**0.2407**	**0.0356**	**0.2763**	**0.0652**	**0.0327**	**0.0979**		**765.8050**	**765.8050**	**9.2900e-003**		**766.0002**

3.3 Site Preparation - 2016

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.3593	13.6350	7.3401	9.3500e-003		0.8338	0.8338		0.7671	0.7671		973.0842	973.0842	0.2935		979.2481
Total	**1.3593**	**13.6350**	**7.3401**	**9.3500e-003**	**0.5303**	**0.8338**	**1.3640**	**0.0573**	**0.7671**	**0.8243**		**973.0842**	**973.0842**	**0.2935**		**979.2481**

3.3 Site Preparation - 2016

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	0.0185	0.0230	0.2173	4.9000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		40.7836	40.7836	2.1800e-003		40.8293
Total	**0.0185**	**0.0230**	**0.2173**	**4.9000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**40.7836**	**40.7836**	**2.1800e-003**		**40.8293**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.1135	0.4180	6.9975	9.3500e-003		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003	0.0000	973.0842	973.0842	0.2935		979.2481
Total	**0.1135**	**0.4180**	**6.9975**	**9.3500e-003**	**0.2386**	**7.5600e-003**	**0.2462**	**0.0258**	**7.5600e-003**	**0.0333**	**0.0000**	**973.0842**	**973.0842**	**0.2935**		**979.2481**

3.3 Site Preparation - 2016

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	0.0185	0.0230	0.2173	4.9000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		40.7836	40.7836	2.1800e-003		40.8293
Total	**0.0185**	**0.0230**	**0.2173**	**4.9000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**40.7836**	**40.7836**	**2.1800e-003**		**40.8293**

3.4 Grading - 2016

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**	**0.7528**	**0.8039**	**1.5566**	**0.4138**	**0.7674**	**1.1811**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.4 Grading - 2016

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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.1330	0.4900	7.8665	0.0120		8.8700e-003	8.8700e-003		8.8700e-003	8.8700e-003	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**0.1330**	**0.4900**	**7.8665**	**0.0120**	**0.3387**	**8.8700e-003**	**0.3476**	**0.1862**	**8.8700e-003**	**0.1951**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

3.4 Grading - 2016

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	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.5 Building Construction - 2016

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	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0334	0.0414	0.3912	8.8000e-004	0.0739	5.5000e-004	0.0745	0.0196	5.1000e-004	0.0201		73.4104	73.4104	3.9200e-003		73.4927
Total	**0.0816**	**0.4297**	**0.9900**	**1.8300e-003**	**0.1005**	**6.3400e-003**	**0.1068**	**0.0272**	**5.8400e-003**	**0.0330**		**168.1141**	**168.1141**	**4.6800e-003**		**168.2122**

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	0.1389	0.5116	7.6980	0.0113		9.2600e-003	9.2600e-003		9.2600e-003	9.2600e-003	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**0.1389**	**0.5116**	**7.6980**	**0.0113**		**9.2600e-003**	**9.2600e-003**		**9.2600e-003**	**9.2600e-003**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.5 Building Construction - 2016

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	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0334	0.0414	0.3912	8.8000e-004	0.0739	5.5000e-004	0.0745	0.0196	5.1000e-004	0.0201		73.4104	73.4104	3.9200e-003		73.4927
Total	**0.0816**	**0.4297**	**0.9900**	**1.8300e-003**	**0.1005**	**6.3400e-003**	**0.1068**	**0.0272**	**5.8400e-003**	**0.0330**		**168.1141**	**168.1141**	**4.6800e-003**		**168.2122**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1203	10.6282	7.2935	0.0111		0.6606	0.6606		0.6113	0.6113		1,083.5832	1,083.5832	0.2969		1,089.8175
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1203**	**10.6282**	**7.2935**	**0.0111**		**0.6606**	**0.6606**		**0.6113**	**0.6113**		**1,083.5832**	**1,083.5832**	**0.2969**		**1,089.8175**

3.6 Paving - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

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	0.1100	0.4051	6.7829	0.0111		7.3300e-003	7.3300e-003		7.3300e-003	7.3300e-003	0.0000	1,083.5832	1,083.5832	0.2969		1,089.8175
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1100**	**0.4051**	**6.7829**	**0.0111**		**7.3300e-003**	**7.3300e-003**		**7.3300e-003**	**7.3300e-003**	**0.0000**	**1,083.5832**	**1,083.5832**	**0.2969**		**1,089.8175**

3.6 Paving - 2016

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	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.0667**	**0.0829**	**0.7823**	**1.7600e-003**	**0.1479**	**1.1100e-003**	**0.1490**	**0.0392**	**1.0200e-003**	**0.0402**		**146.8209**	**146.8209**	**7.8300e-003**		**146.9854**

3.7 Architectural Coating - 2016

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	25.0290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**25.3975**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

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	7.4100e-003	9.2100e-003	0.0869	2.0000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		16.3134	16.3134	8.7000e-004		16.3317
Total	**7.4100e-003**	**9.2100e-003**	**0.0869**	**2.0000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**16.3134**	**16.3134**	**8.7000e-004**		**16.3317**

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	25.0290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1095	1.8324	2.9700e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**25.0587**	**0.1095**	**1.8324**	**2.9700e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.7 Architectural Coating - 2016

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	7.4100e-003	9.2100e-003	0.0869	2.0000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		16.3134	16.3134	8.7000e-004		16.3317
Total	**7.4100e-003**	**9.2100e-003**	**0.0869**	**2.0000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**16.3134**	**16.3134**	**8.7000e-004**		**16.3317**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0354	0.0800	0.3641	8.6000e-004	0.0614	1.0700e-003	0.0624	0.0164	9.8000e-004	0.0174		70.7088	70.7088	2.8700e-003		70.7690
Unmitigated	0.0354	0.0800	0.3641	8.6000e-004	0.0614	1.0700e-003	0.0624	0.0164	9.8000e-004	0.0174		70.7088	70.7088	2.8700e-003		70.7690

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	9.94	9.94	9.94	29,008	29,008
Total	9.94	9.94	9.94	29,008	29,008

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
NaturalGas Unmitigated	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830

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					
General Light Industry	697.71	7.5200e-003	0.0684	0.0575	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0835	82.0835	1.5700e-003	1.5000e-003	82.5830
Total		**7.5200e-003**	**0.0684**	**0.0575**	**4.1000e-004**		**5.2000e-003**	**5.2000e-003**		**5.2000e-003**	**5.2000e-003**		**82.0835**	**82.0835**	**1.5700e-003**	**1.5000e-003**	**82.5830**

5.2 Energy by Land Use - NaturalGas

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					
General Light Industry	0.657409	7.0900e-003	0.0645	0.0541	3.9000e-004		4.9000e-003	4.9000e-003		4.9000e-003	4.9000e-003		77.3423	77.3423	1.4800e-003	1.4200e-003	77.8130
Total		**7.0900e-003**	**0.0645**	**0.0541**	**3.9000e-004**		**4.9000e-003**	**4.9000e-003**		**4.9000e-003**	**4.9000e-003**		**77.3423**	**77.3423**	**1.4800e-003**	**1.4200e-003**	**77.8130**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Unmitigated	0.5996	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-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	lb/day										lb/day					
Architectural Coating	0.1372					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Total	**0.5996**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7300e-003**	**4.7300e-003**	**1.0000e-005**		**5.0000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1372					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7300e-003	4.7300e-003	1.0000e-005		5.0000e-003
Total	**0.5996**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7300e-003**	**4.7300e-003**	**1.0000e-005**		**5.0000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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
Generator Sets	2	8.00	260	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	1.0108	8.2268	7.4944	0.0132		0.5240	0.5240		0.5240	0.5240		1,246.0691	1,246.0691	0.0899		1,247.9570
Total	**1.0108**	**8.2268**	**7.4944**	**0.0132**		**0.5240**	**0.5240**		**0.5240**	**0.5240**		**1,246.0691**	**1,246.0691**	**0.0899**		**1,247.9570**

10.0 Vegetation

Valiano - Wastewater Treatment and Water Reclamation Facility (WTWRF)

San Diego County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.01	0.95	0.03	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.85	0.93	0.06	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.77	0.77	0.07	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.88	0.95	0.09	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.86	0.95	0.06	0.00	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.90	0.97	0.04	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	1	1	Level 2	15.00
Cement and Mortar Mixers	Diesel	Tier 4 Final	4	4	Level 2	15.00
Concrete/Industrial Saws	Diesel	Tier 4 Final	2	2	Level 2	15.00
Cranes	Diesel	Tier 4 Final	1	1	Level 2	15.00
Forklifts	Diesel	Tier 4 Final	2	2	Level 2	15.00
Graders	Diesel	Tier 4 Final	1	1	Level 2	15.00
Pavers	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rollers	Diesel	Tier 4 Final	1	1	Level 2	15.00
Rubber Tired Dozers	Diesel	Tier 4 Final	2	2	Level 2	15.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	8	8	Level 2	15.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	9.20000E-004	5.93000E-003	4.71000E-003	1.00000E-005	4.90000E-004	4.90000E-004	0.00000E+000	6.38310E-001	6.38310E-001	8.00000E-005	0.00000E+000	6.39890E-001
Cement and Mortar Mixers	4.40000E-004	2.77000E-003	2.31000E-003	1.00000E-005	1.10000E-004	1.10000E-004	0.00000E+000	3.43710E-001	3.43710E-001	4.00000E-005	0.00000E+000	3.44460E-001
Concrete/Industrial Saws	3.88000E-003	2.77300E-002	2.26500E-002	4.00000E-005	2.08000E-003	2.08000E-003	0.00000E+000	3.22594E+000	3.22594E+000	3.10000E-004	0.00000E+000	3.23250E+000
Cranes	1.80000E-002	2.13290E-001	7.46200E-002	1.40000E-004	9.68000E-003	8.90000E-003	0.00000E+000	1.32956E+001	1.32956E+001	4.01000E-003	0.00000E+000	1.33798E+001
Forklifts	1.70200E-002	1.46500E-001	9.47300E-002	1.10000E-004	1.22500E-002	1.12700E-002	0.00000E+000	1.07993E+001	1.07993E+001	3.26000E-003	0.00000E+000	1.08677E+001
Graders	5.10000E-004	5.19000E-003	2.46000E-003	0.00000E+000	2.90000E-004	2.70000E-004	0.00000E+000	2.94570E-001	2.94570E-001	9.00000E-005	0.00000E+000	2.96430E-001
Pavers	8.80000E-004	9.87000E-003	6.24000E-003	1.00000E-005	4.90000E-004	4.50000E-004	0.00000E+000	9.30770E-001	9.30770E-001	2.80000E-004	0.00000E+000	9.36660E-001
Rollers	7.40000E-004	6.81000E-003	4.40000E-003	1.00000E-005	5.00000E-004	4.60000E-004	0.00000E+000	5.40720E-001	5.40720E-001	1.60000E-004	0.00000E+000	5.44150E-001
Rubber Tired Dozers	9.30000E-004	1.04000E-002	7.86000E-003	1.00000E-005	4.80000E-004	4.50000E-004	0.00000E+000	6.28290E-001	6.28290E-001	1.90000E-004	0.00000E+000	6.32270E-001
Tractors/Loaders/Backhoes	3.80400E-002	3.63550E-001	2.69460E-001	3.50000E-004	2.79900E-002	2.57500E-002	0.00000E+000	3.27954E+001	3.27954E+001	9.89000E-003	0.00000E+000	3.30031E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	7.00000E-005	2.70000E-004	4.58000E-003	1.00000E-005	0.00000E+000	0.00000E+000	0.00000E+000	6.38310E-001	6.38310E-001	8.00000E-005	0.00000E+000	6.39890E-001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	1.00000E-005	0.00000E+000	0.00000E+000	0.00000E+000	3.43710E-001	3.43710E-001	4.00000E-005	0.00000E+000	3.44460E-001
Concrete/Industrial Saws	3.80000E-004	1.38000E-003	2.31500E-002	4.00000E-005	3.00000E-005	3.00000E-005	0.00000E+000	3.22594E+000	3.22594E+000	3.10000E-004	0.00000E+000	3.23250E+000
Cranes	1.73000E-003	6.39000E-003	6.35800E-002	1.40000E-004	1.20000E-004	1.20000E-004	0.00000E+000	1.32956E+001	1.32956E+001	4.01000E-003	0.00000E+000	1.33798E+001
Forklifts	1.41000E-003	5.20000E-003	8.71200E-002	1.10000E-004	9.00000E-005	9.00000E-005	0.00000E+000	1.07993E+001	1.07993E+001	3.26000E-003	0.00000E+000	1.08677E+001
Graders	4.00000E-005	1.40000E-004	2.33000E-003	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.94570E-001	2.94570E-001	9.00000E-005	0.00000E+000	2.96430E-001
Pavers	1.20000E-004	4.50000E-004	7.49000E-003	1.00000E-005	1.00000E-005	1.00000E-005	0.00000E+000	9.30770E-001	9.30770E-001	2.80000E-004	0.00000E+000	9.36660E-001
Rollers	7.00000E-005	2.60000E-004	4.34000E-003	1.00000E-005	0.00000E+000	0.00000E+000	0.00000E+000	5.40720E-001	5.40720E-001	1.60000E-004	0.00000E+000	5.44150E-001
Rubber Tired Dozers	8.00000E-005	3.00000E-004	2.97000E-003	1.00000E-005	1.00000E-005	1.00000E-005	0.00000E+000	6.28290E-001	6.28290E-001	1.90000E-004	0.00000E+000	6.32270E-001
Tractors/Loaders/Backhoes	4.24000E-003	1.56200E-002	2.61580E-001	3.50000E-004	2.80000E-004	2.80000E-004	0.00000E+000	3.27953E+001	3.27953E+001	9.89000E-003	0.00000E+000	3.30031E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	9.23913E-001	9.54469E-001	2.76008E-002	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	1.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	9.02062E-001	9.50234E-001	-2.20751E-002	0.00000E+000	9.85577E-001	9.85577E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	9.03889E-001	9.70041E-001	1.47950E-001	0.00000E+000	9.87603E-001	9.86517E-001	0.00000E+000	1.50426E-006	1.50426E-006	0.00000E+000	0.00000E+000	1.49479E-006
Forklifts	9.17156E-001	9.64505E-001	8.03336E-002	0.00000E+000	9.92653E-001	9.92014E-001	0.00000E+000	9.25989E-007	9.25989E-007	0.00000E+000	0.00000E+000	1.84032E-006
Graders	9.21569E-001	9.73025E-001	5.28455E-002	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	8.63636E-001	9.54407E-001	-2.00321E-001	0.00000E+000	9.79592E-001	9.77778E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	9.05405E-001	9.61821E-001	1.36364E-002	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	9.13978E-001	9.71154E-001	6.22137E-001	0.00000E+000	9.79167E-001	9.77778E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	8.88538E-001	9.57035E-001	2.92437E-002	0.00000E+000	9.89996E-001	9.89126E-001	0.00000E+000	1.21968E-006	1.21968E-006	0.00000E+000	0.00000E+000	1.21201E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Fugitive Dust	0.01	0.00	0.00	0.00	0.55	0.55
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.00	0.00	0.00	0.00	0.55	0.54
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.56	0.67
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.88	7.88	7.81	7.55	7.88
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	5.84	5.77	5.82	0.00	6.32	6.32	0.00	5.78	5.78	3.85	8.00	5.78
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	20.00	20.00	20.02	20.15	20.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

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

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
Yes	Install High Efficiency Lighting	15.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Appendix E

CO HOT SPOTS ANALYSIS DATA

Title : San Diego County Subarea Annual CYr 2020 CO Emission Factors
Version : Emfac2011-LDV V2.50.58.094 Sp: Trip Assign San Diego County
Run Date : 2014/04/24 14:11:27
Scen Year: 2020 -- All model years in the range 1976 to 2020 selected
Season : Annual
Area : San Diego
****

Year: 2020 -- Model Years 1976 to 2020 Inclusive -- Annual
Emfac2011-LDV Emission Factors: V2.50.58.094 Sp: Trip Assign San Diego County

County Average San Diego County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
3	2.313	3.228	4.623	24.723	13.629	27.287	3.331
4	2.243	3.133	4.523	24.723	13.629	27.287	3.250
5	2.177	3.043	4.428	24.723	13.629	27.287	3.174
6	2.115	2.958	4.237	22.690	12.416	26.272	3.059
7	2.056	2.877	4.061	20.870	11.338	25.340	2.953
8	2.001	2.800	3.899	19.237	10.378	24.482	2.854
9	1.948	2.727	3.749	17.771	9.522	23.694	2.762
10	1.899	2.658	3.611	16.452	8.757	22.969	2.676
11	1.852	2.592	3.482	15.265	8.072	22.303	2.595
12	1.807	2.530	3.363	14.194	7.458	21.692	2.520
13	1.764	2.470	3.252	13.227	6.908	21.132	2.449
14	1.723	2.413	3.148	12.352	6.413	20.619	2.383
15	1.684	2.358	3.052	11.561	5.967	20.151	2.320
16	1.647	2.305	2.961	10.845	5.565	19.725	2.261
17	1.612	2.255	2.876	10.195	5.203	19.338	2.205
18	1.578	2.207	2.796	9.606	4.875	18.989	2.152
19	1.545	2.161	2.721	9.070	4.579	18.675	2.102
20	1.514	2.117	2.651	8.586	4.311	18.395	2.055
21	1.484	2.075	2.584	8.145	4.068	18.148	2.011
22	1.456	2.034	2.522	7.744	3.848	17.933	1.968
23	1.428	1.995	2.462	7.378	3.648	17.747	1.928
24	1.402	1.957	2.406	7.046	3.467	17.592	1.890
25	1.376	1.921	2.353	6.743	3.302	17.466	1.853
26	1.352	1.886	2.303	6.467	3.153	17.368	1.819
27	1.328	1.852	2.256	6.216	3.017	17.300	1.786
28	1.306	1.820	2.210	5.987	2.894	17.259	1.755
29	1.284	1.789	2.168	5.780	2.783	17.247	1.725
30	1.263	1.759	2.127	5.592	2.682	17.265	1.697
31	1.243	1.731	2.088	5.423	2.590	17.311	1.671
32	1.223	1.703	2.052	5.269	2.508	17.387	1.646
33	1.205	1.676	2.017	5.132	2.434	17.495	1.622
34	1.187	1.651	1.984	5.009	2.367	17.634	1.599
35	1.169	1.626	1.953	4.899	2.308	17.806	1.578
36	1.153	1.602	1.923	4.803	2.255	18.012	1.558
37	1.137	1.580	1.896	4.718	2.209	18.255	1.539
38	1.122	1.558	1.869	4.645	2.169	18.535	1.522
39	1.107	1.537	1.844	4.584	2.134	18.856	1.505
40	1.093	1.517	1.821	4.533	2.105	19.220	1.490

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: BARHAM DR AND TWIN OAKS VALLEY RD AMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	1420	1.7	.0	10.5
B. NA	2	-150	2	0	AG	1350	3.1	.0	9.9
C. ND	2	0	2	150	AG	1721	2.2	.0	9.9
D. NE	2	150	2	450	AG	1721	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	2744	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	2114	3.1	.0	9.9
G. SD	-2	0	-2	-150	AG	1740	2.2	.0	9.9
H. SE	-2	-150	-2	-450	AG	1740	1.7	.0	10.5
I. WF	450	2	150	2	AG	1364	1.7	.0	10.5
J. WA	150	2	0	2	AG	1124	3.3	.0	9.9
K. WD	0	2	-150	2	AG	1538	3.3	.0	9.9
L. WE	-150	2	-450	2	AG	1538	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	712	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	371	3.2	.0	9.9
O. ED	0	-2	150	-2	AG	1241	3.3	.0	9.9
P. EE	150	-2	450	-2	AG	1241	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	70	2.3	.0	9.9
R. SL	0	0	-2	150	AG	630	2.5	.0	9.9
S. WL	0	0	150	2	AG	240	2.9	.0	9.9
T. EL	0	0	-150	-2	AG	341	3.0	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	2.1	.0	.0	.3	.0	.0	.3	.0	.0
2. SE3	354.	2.2	.0	.1	.7	.0	.0	.6	.0	.0
3. SW3	5.	2.3	.0	.0	.3	.0	.0	1.1	.1	.0
4. NW3	95.	2.2	.0	.0	.2	.0	.0	.5	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.9	.0	.0	.1	.0	.0	.0	.0	.0	.2
2. SE3	.0	.2	.0	.0	.0	.0	.3	.0	.0	.2	.0	.0
3. SW3	.0	.0	.3	.0	.0	.0	.0	.0	.0	.2	.0	.0
4. NW3	.0	.7	.1	.0	.0	.0	.4	.0	.0	.0	.1	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: BARHAM DR AND TWIN OAKS VALLEY RD PMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	2195	1.7	.0	10.5
B. NA	2	-150	2	0	AG	2120	3.3	.0	9.9
C. ND	2	0	2	150	AG	3155	2.5	.0	9.9
D. NE	2	150	2	450	AG	3155	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	2282	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	1842	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	1600	2.5	.0	9.9
H. SE	-2	-150	-2	-450	AG	1600	1.7	.0	10.5
I. WF	450	2	150	2	AG	1342	1.7	.0	10.5
J. WA	150	2	0	2	AG	1052	3.3	.0	9.9
K. WD	0	2	-150	2	AG	1199	3.3	.0	9.9
L. WE	-150	2	-450	2	AG	1199	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	1740	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	795	3.3	.0	9.9
O. ED	0	-2	150	-2	AG	1605	3.3	.0	9.9
P. EE	150	-2	450	-2	AG	1605	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	75	2.5	.0	9.9
R. SL	0	0	-2	150	AG	440	2.5	.0	9.9
S. WL	0	0	150	2	AG	290	2.8	.0	9.9
T. EL	0	0	-150	-2	AG	945	3.3	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	264.	2.6	.0	.0	.6	.0	.0	.3	.0	.0
2. SE3	355.	2.9	.0	.2	1.3	.0	.1	.5	.0	.0
3. SW3	5.	2.7	.0	.0	.6	.1	.0	1.1	.1	.0
4. NW3	95.	2.4	.0	.0	.4	.0	.0	.4	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.1	.7	.0	.0	.3	.0	.0	.0	.0	.0	.4
2. SE3	.0	.2	.0	.0	.0	.0	.4	.0	.0	.2	.0	.0
3. SW3	.0	.0	.2	.0	.0	.2	.0	.0	.0	.2	.0	.2
4. NW3	.0	.7	.1	.0	.0	.0	.4	.0	.0	.0	.1	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: AUTO PKWY AND MISSION AVE AMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	1385	1.7	.0	10.5
B. NA	2	-150	2	0	AG	933	3.2	.0	9.9
C. ND	2	0	2	150	AG	1404	2.4	.0	9.9
D. NE	2	150	2	450	AG	1404	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	1544	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	1194	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	1221	2.4	.0	9.9
H. SE	-2	-150	-2	-450	AG	1221	1.7	.0	10.5
I. WF	450	2	150	2	AG	934	1.7	.0	10.5
J. WA	150	2	0	2	AG	830	3.3	.0	9.9
K. WD	0	2	-150	2	AG	1382	3.3	.0	9.9
L. WE	-150	2	-450	2	AG	1382	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	973	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	633	3.3	.0	9.9
O. ED	0	-2	150	-2	AG	829	3.2	.0	9.9
P. EE	150	-2	450	-2	AG	829	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	452	2.5	.0	9.9
R. SL	0	0	-2	150	AG	350	2.5	.0	9.9
S. WL	0	0	150	2	AG	104	2.8	.0	9.9
T. EL	0	0	-150	-2	AG	340	2.9	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.9	.0	.0	.2	.0	.0	.2	.0	.0
2. SE3	355.	1.7	.0	.0	.6	.0	.0	.4	.0	.0
3. SW3	5.	1.8	.0	.0	.3	.0	.0	.7	.0	.0
4. NW3	175.	1.7	.0	.3	.0	.0	.0	.1	.6	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.8	.0	.0	.2	.0	.0	.0	.0	.0	.1
2. SE3	.0	.1	.0	.0	.0	.0	.2	.0	.0	.1	.0	.0
3. SW3	.0	.0	.2	.0	.0	.1	.0	.0	.0	.1	.0	.0
4. NW3	.0	.0	.3	.0	.0	.1	.0	.0	.2	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: AUTO PKWY AND MISSION AVE PMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	1673	1.7	.0	10.5
B. NA	2	-150	2	0	AG	1176	3.3	.0	9.9
C. ND	2	0	2	150	AG	1993	2.8	.0	9.9
D. NE	2	150	2	450	AG	1993	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	1253	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	1103	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	1244	2.8	.0	9.9
H. SE	-2	-150	-2	-450	AG	1244	1.7	.0	10.5
I. WF	450	2	150	2	AG	900	1.7	.0	10.5
J. WA	150	2	0	2	AG	860	3.3	.0	9.9
K. WD	0	2	-150	2	AG	1287	3.2	.0	9.9
L. WE	-150	2	-450	2	AG	1287	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	1711	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	1261	3.3	.0	9.9
O. ED	0	-2	150	-2	AG	1013	3.2	.0	9.9
P. EE	150	-2	450	-2	AG	1013	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	497	2.7	.0	9.9
R. SL	0	0	-2	150	AG	150	2.5	.0	9.9
S. WL	0	0	150	2	AG	40	2.6	.0	9.9
T. EL	0	0	-150	-2	AG	450	2.9	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	2.1	.0	.0	.4	.0	.0	.2	.0	.0
2. SE3	275.	2.1	.0	.3	.0	.0	.0	.0	.2	.0
3. SW3	5.	2.0	.0	.0	.4	.0	.0	.7	.0	.0
4. NW3	175.	2.0	.0	.4	.0	.0	.0	.0	.7	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.8	.0	.0	.4	.0	.0	.0	.0	.0	.2
2. SE3	.0	.0	.4	.0	.0	.8	.0	.0	.0	.0	.0	.2
3. SW3	.0	.0	.2	.0	.0	.3	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.3	.0	.0	.2	.0	.0	.2	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: VALLEY PKWY AND 9TH AVE AMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	941	1.7	.0	10.5
B. NA	2	-150	2	0	AG	921	3.0	.0	9.9
C. ND	2	0	2	150	AG	1211	2.2	.0	9.9
D. NE	2	150	2	450	AG	1211	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	1459	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	1339	3.2	.0	9.9
G. SD	-2	0	-2	-150	AG	1240	2.2	.0	9.9
H. SE	-2	-150	-2	-450	AG	1240	1.7	.0	10.5
I. WF	450	2	150	2	AG	725	1.7	.0	10.5
J. WA	150	2	0	2	AG	570	3.3	.0	9.9
K. WD	0	2	-150	2	AG	614	2.7	.0	9.9
L. WE	-150	2	-450	2	AG	614	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	566	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	333	2.9	.0	9.9
O. ED	0	-2	150	-2	AG	626	2.7	.0	9.9
P. EE	150	-2	450	-2	AG	626	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	20	2.3	.0	9.9
R. SL	0	0	-2	150	AG	120	2.3	.0	9.9
S. WL	0	0	150	2	AG	155	2.9	.0	9.9
T. EL	0	0	-150	-2	AG	233	2.9	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	1.2	.0	.5	.0	.0	.0	.0	.2	.0
2. SE3	355.	1.4	.0	.0	.5	.0	.0	.4	.0	.0
3. SW3	5.	1.5	.0	.0	.2	.0	.0	.8	.0	.0
4. NW3	5.	1.3	.0	.0	.2	.0	.0	.9	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: VALLEY PKWY AND 9TH AVE PMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	1096	1.7	.0	10.5
B. NA	2	-150	2	0	AG	1066	3.3	.0	9.9
C. ND	2	0	2	150	AG	1225	2.3	.0	9.9
D. NE	2	150	2	450	AG	1225	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	1350	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	1210	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	1250	2.3	.0	9.9
H. SE	-2	-150	-2	-450	AG	1250	1.7	.0	10.5
I. WF	450	2	150	2	AG	613	1.7	.0	10.5
J. WA	150	2	0	2	AG	377	3.1	.0	9.9
K. WD	0	2	-150	2	AG	513	2.3	.0	9.9
L. WE	-150	2	-450	2	AG	513	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	758	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	462	3.3	.0	9.9
O. ED	0	-2	150	-2	AG	829	3.3	.0	9.9
P. EE	150	-2	450	-2	AG	829	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	30	2.3	.0	9.9
R. SL	0	0	-2	150	AG	140	2.3	.0	9.9
S. WL	0	0	150	2	AG	236	2.9	.0	9.9
T. EL	0	0	-150	-2	AG	296	2.9	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	1.4	.0	.7	.0	.0	.0	.0	.3	.0
2. SE3	355.	1.5	.0	.0	.5	.0	.0	.4	.0	.0
3. SW3	5.	1.5	.0	.0	.3	.0	.0	.8	.0	.0
4. NW3	175.	1.3	.0	.3	.0	.0	.0	.1	.5	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: VALLEY PKWY AND I-15 SB RAMPS AMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	161	1.7	.0	10.5
B. NA	2	-150	2	0	AG	130	2.9	.0	9.9
C. ND	2	0	2	150	AG	423	2.1	.0	9.9
D. NE	2	150	2	450	AG	423	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	1085	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	732	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	223	2.0	.0	9.9
H. SE	-2	-150	-2	-450	AG	223	1.7	.0	10.5
I. WF	450	2	150	2	AG	1318	1.7	.0	10.5
J. WA	150	2	0	2	AG	1228	3.3	.0	9.9
K. WD	0	2	-150	2	AG	1641	2.3	.0	9.9
L. WE	-150	2	-450	2	AG	1641	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	925	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	812	2.8	.0	9.9
O. ED	0	-2	150	-2	AG	1202	2.3	.0	9.9
P. EE	150	-2	450	-2	AG	1202	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	31	2.9	.0	9.9
R. SL	0	0	-2	150	AG	353	3.1	.0	9.9
S. WL	0	0	150	2	AG	90	2.3	.0	9.9
T. EL	0	0	-150	-2	AG	113	2.3	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.4	.0	.0	.0	.0	.0	.1	.0	.0
2. SE3	354.	1.1	.0	.0	.2	.0	.0	.3	.0	.0
3. SW3	85.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	95.	1.6	.0	.0	.0	.0	.0	.2	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.1	.7	.0	.0	.2	.0	.0	.0	.0	.0	.0
2. SE3	.0	.2	.0	.0	.0	.0	.2	.0	.0	.2	.0	.0
3. SW3	.0	.4	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
4. NW3	.0	.8	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: VALLEY PKWY AND I-15 SB RAMPS PMWP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NF	2	-450	2	-150	AG	433	1.7	.0	10.5
B. NA	2	-150	2	0	AG	400	3.3	.0	9.9
C. ND	2	0	2	150	AG	582	3.3	.0	9.9
D. NE	2	150	2	450	AG	582	1.7	.0	10.5
E. SF	-2	450	-2	150	AG	797	1.7	.0	10.5
F. SA	-2	150	-2	0	AG	536	3.3	.0	9.9
G. SD	-2	0	-2	-150	AG	501	2.9	.0	9.9
H. SE	-2	-150	-2	-450	AG	501	1.7	.0	10.5
I. WF	450	2	150	2	AG	1413	1.7	.0	10.5
J. WA	150	2	0	2	AG	1143	3.0	.0	9.9
K. WD	0	2	-150	2	AG	1192	2.0	.0	9.9
L. WE	-150	2	-450	2	AG	1192	1.7	.0	10.5
M. EF	-450	-2	-150	-2	AG	1828	1.7	.0	10.5
N. EA	-150	-2	0	-2	AG	1726	3.0	.0	9.9
O. ED	0	-2	150	-2	AG	2196	2.0	.0	9.9
P. EE	150	-2	450	-2	AG	2196	1.7	.0	10.5
Q. NL	0	0	2	-150	AG	33	3.0	.0	9.9
R. SL	0	0	-2	150	AG	261	3.1	.0	9.9
S. WL	0	0	150	2	AG	270	2.3	.0	9.9
T. EL	0	0	-150	-2	AG	102	2.2	.0	9.9

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. NE3	8	8	1.8
2. SE3	8	-8	1.8
3. SW3	-8	-8	1.8
4. NW3	-8	8	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	265.	1.4	.0	.0	.1	.0	.0	.0	.0	.0
2. SE3	275.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	85.	1.6	.0	.0	.0	.0	.0	.0	.1	.0
4. NW3	95.	1.6	.0	.0	.1	.0	.0	.1	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.4	.0	.0	.4	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.2	.0	.0	.9	.1	.0	.0	.0	.0	.0
3. SW3	.0	.3	.0	.0	.0	.1	.7	.0	.0	.0	.0	.0
4. NW3	.0	.7	.0	.0	.0	.0	.3	.1	.0	.0	.1	.0

Appendix F

CONSTRUCTION SCREENING DPM HEALTH RISK ASSESSMENT DATA

Screening HRA Heath Risk Inputs and Calculations for Project-related Construction DPM

1	*24 hrs/24 hrs*	

*assume all PM10 exhaust is DPM

*assumption is that emissions are constant over the acres disturbed

	Emission Calcs
1.776999303	Highest Unmitgated CalEEMod Exhaust PM10 emissions in Lbs/day
453.6	grams/pound
3600	seconds/hour
24	hours/day
100.00	percent of day
365.25	days/yr
2.55421E-05	grams/second

	Area Calcs
90	Max area disturbed (acres)
4046.825	meters2/acre
364214.25	meters2
603.501657	meters x meters

Screen 3 assumptions

1.5 m receptor height

3.0 m stack height

use discrete distances as well as array from 0 to 5,000 m

rural setting

	SCREEN3 Emission Rate
7.01293E-11	grams/second*meter2

0.00000000007 value inserted in SCREEN3 model

0.3048	conversion factor from ft to m

ft	m	SCREEN3 Distances	
10.00	3.05	receptor 1	* project boundary
328.08	100.00	receptor 2	* 100 meter (328 ft) from project boundary
984.25	300.00	receptor 3	* 300 meter (984 ft) from project boundary
1,312.34	400.00	receptor 4	* 400 meter (1,312 ft) from project boundary
1,640.42	500.00	receptor 5	* 500 meter (1,640 ft) from project boundary
1,968.50	600.00	receptor 6	* 600 meter (1,968ft) from project boundary
1,564.96	477.00	highest concentration	* highest receptor location

0.3048 conversion factor from ft to m

Highest Concentration (329 m)			
	HRA Calcs		
0.00582	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file	
0.1	1-hour --> annual conversion	From June 2007 BAAQMD PERMIT MODELING GUIDANCE, pg. 4	
5.82E-04	SCREEN3 annual concentration (micrograms/meter3)		
7.15E-09	Calculated dose (mg/kg-day)		
0.008	Cancer risk (per million)		
0.01164	Hazard Index		
5	Chronic inhallation REL (micrograms/meter3)		
365	days of construction		
1.000	(% of day)		
260	Exposure frequency (EF)	days/year	*# of construction days*
4	Exposure duration (ED)	Years	*# of days/365*
25550	Averaging time (AT)	days	
302	Daily breathing rate (DBR)	L/kg body weight	
1	Inhalation absorption factor (A)	None	
1.00E-03	Micrograms to milligrams conversion	1 microgram	
1.00E-03	liters to cubic meters conversion	liters	
1.1	Cancer potency factor	mg/kg-day	
1.00E+06	risk per million people	None	

Project Boundary

10 feet (3m)		
	HRA Calcs	
0.00338	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
3.38E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
4.16E-09	Calculated dose (mg/kg-day)	
0.005	Cancer risk (per million)	
0.00677	Hazard Index	

328 feet (100m)		
	HRA Calcs	
0.00399	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
3.99E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
4.90E-09	Calculated dose (mg/kg-day)	
0.005	Cancer risk (per million)	
0.00798	Hazard Index	

984 feet (300m)

	HRA Calcs	
0.00507	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
5.07E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
6.24E-09	Calculated dose (mg/kg-day)	
0.007	Cancer risk (per million)	
0.01015	Hazard Index	

1,312 feet (400m)

	HRA Calcs	
0.00553	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
5.53E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
6.80E-09	Calculated dose (mg/kg-day)	
0.007	Cancer risk (per million)	
0.01106	Hazard Index	

1,640 feet (500m)

	HRA Calcs	
0.00577	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
5.77E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
7.09E-09	Calculated dose (mg/kg-day)	
0.008	Cancer risk (per million)	
0.01154	Hazard Index	

1,968 feet (600m)

	HRA Calcs	
0.00506	SCREEN3 1-hour concentration (micrograms/meter3)	Value obtained from SCREEN3 output file
0.1	1-hour --> 24-hr conversion	
5.06E-04	SCREEN3 24-hour concentration (micrograms/meter3)	
6.22E-09	Calculated dose (mg/kg-day)	
0.007	Cancer risk (per million)	
0.01012	Hazard Index	

```
03/09/15

09:09:45
  ***  SCREEN3 MODEL RUN  ***
  *** VERSION DATED 96043 ***

 C:\Users\VictorO\Desktop\IPQ11-Valiano.scr

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE                =         AREA
    EMISSION RATE (G/(S-M**2)) =     0.701293E-10
    SOURCE HEIGHT (M)          =       3.0000
    LENGTH OF LARGER SIDE (M)  =     604.0000
    LENGTH OF SMALLER SIDE (M) =     603.0000
    RECEPTOR HEIGHT (M)        =       0.0000
    URBAN/RURAL OPTION         =        RURAL
 THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

    MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


 BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

 *** FULL METEOROLOGY ***

 **********************************
 *** SCREEN AUTOMATED DISTANCES ***
 **********************************

 *** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

   DIST     CONC             U10M   USTK  MIX HT   PLUME  MAX DIR
    (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   (DEG)
 -------  ----------  ----  -----  -----  ------  ------  -------
      3.  0.3383E-02    6     1.0    1.0 10000.0    3.00     45.
    100.  0.3990E-02    6     1.0    1.0 10000.0    3.00     45.
    200.  0.4551E-02    6     1.0    1.0 10000.0    3.00     43.
    300.  0.5073E-02    6     1.0    1.0 10000.0    3.00     45.
    400.  0.5530E-02    6     1.0    1.0 10000.0    3.00     45.
    500.  0.5768E-02    6     1.0    1.0 10000.0    3.00     45.
    600.  0.5059E-02    6     1.0    1.0 10000.0    3.00     45.

 MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     3. M:
    477.  0.5820E-02    6     1.0    1.0 10000.0    3.00     45.

      ***************************************
      *** SUMMARY OF SCREEN MODEL RESULTS ***
      ***************************************

  CALCULATION        MAX CONC    DIST TO   TERRAIN
   PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
 --------------    -----------   -------   -------
 SIMPLE TERRAIN     0.5820E-02      477.        0.
```

```
**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

Appendix G

WTWRF SCREENING TAC HEALTH RISK ASSESSMENT DATA

VOC Emissions from Influent Treatment

Peak Daily Influent Flow (gal/day)	190,660
Average Influent Flow (gal/day)	76,020
Conversion Factor from µg/L and MGD to lb/yr	3.04
Annual x/Q from SCREEN3 modeling (1-hour x/Q x 0.1)	27.09
Max 24-hr x/Q (1-hr x/Q * 0.4)	108.4

						Annual Average Ambient Concs.		24-Hr Average Ambient Concs.		Carcinogenic Risk		Non-Cancer Risk			
Compound	Risk Assessment Averaging Period	Toxic Influent Concentration (µg/L)	Peak Daily Emissions (lbs/day)	Annual Average Emissions (lbs/year)	Emission Rate (g/s)	SCREEN3 Dispersion factor (ug/m3) / (g/s)	Annual Ambient Conc. (µg/m3)	SCREEN3 Dispersion factor (ug/m3) / (g/s)	24-hr Ambient Conc. (µg/m3)	Unit Risk Factors (µg/m3^{-1})	Cancer Risk	Chronic Inhalation REL	Chronic Non-Cancer Risk	Acute Inhalation REL	24-hr (Acute) Non-Cancer Risk
Ammonia	Annual, 24-hr	299.5	4.76485E-05	0.0069344	5.51487E-10	27.09	1.49E-07	108.4	5.98E-08	0	-	200	2.99E-10	3200	1.87E-11
Benzene	Annual, 24-hr	0.58	9.22742E-08	1.343E-05	1.06799E-12	27.09	2.89E-10	108.4	1.16E-10	2.90E-05	3.49E-09	60	1.93E-12	1300	8.90E-14
Chloroform	Annual, 24-hr	8.1	1.28866E-06	0.0001875	1.4915E-11	27.09	4.04E-09	108.3	1.62E-09	5.30E-06	9.27E-09	300	5.39E-12	150	1.08E-11
Ethyl Benzene	Annual	2.25	3.5796E-07	5.21E-05	4.14306E-12	27.08	1.12E-09	108.3	4.49E-10	2.50E-06	1.18E-09	2000	2.24E-13	-	-
Hydrogen Sulfide	Annual, 24-hr	19.5	3.10232E-06	0.0004515	3.59065E-11	27.09	9.73E-09	108.3	3.89E-09	0	-	10	3.89E-10	42	9.26E-11
1,1,1-TCA	Annual	2.65	4.21598E-07	6.136E-05	4.8796E-12	27.09	1.32E-09	108.4	5.29E-10	0	-	1000	5.29E-13	68000	7.78E-15
Methylene Chlorine	Annual, 24-hr	7.8	1.24093E-06	0.0001806	1.43626E-11	27.08	3.89E-09	108.3	1.56E-09	1.00E-06	1.64E-09	400	3.89E-12	14000	1.11E-13
1,4-Dichlorobenzene	Annual	4.65	7.39785E-07	0.0001077	8.56232E-12	27.08	2.32E-09	108.3	9.28E-10	1.10E-05	1.12E-08	800	1.16E-12	-	-
Phenol	Annual, 24-hr	9.8	1.55912E-06	0.0002269	1.80453E-11	27.09	4.89E-09	108.3	1.96E-09	0	-	200	9.78E-12	5800	3.37E-13
Styrene	Annual, 24-hr	5	7.95467E-07	0.0001158	9.2068E-12	27.09	2.49E-09	108.4	9.98E-10	0	-	900	1.11E-12	21000	4.75E-14
Toluene	Annual, 24-hr	4.9	7.79558E-07	0.0001135	9.02266E-12	27.09	2.44E-09	108.3	9.78E-10	0	-	300	3.26E-12	37000	2.64E-14
TCE	Annual	2.6	4.13643E-07	6.02E-05	4.78754E-12	27.09	1.30E-09	108.4	5.19E-10	2.00E-06	1.10E-09	600	8.65E-13	-	-
Xylene	Annual, 24-hr	5.86	9.32288E-07	0.0001357	1.07904E-11	27.09	2.92E-09	108.4	1.17E-09	0	-	700	1.67E-12	22000	5.31E-14
			5.93721E-05	0.0086406							2.79E-08		7.18E-10		1.23E-10

Daily Emissions (lb/day) = peak daily influent flow (gal/day) x liquid conversion factor (3.785 L/gal) x toxic influent concentration (µg/L) x unit conversion factor (10-6 g/µg) x lb/453.6 g

Sources: Emission factors from SJVAPCD's Fugitive Air Emission Factors and and (ug/L) Concentration Values for Wastewater Treatment Plants (POTWS) November 1993.
OEHHA Revised Air Toxics Hot Spots Program Technical Support Document for Unit Risk and Cancer Potency Values Updated 2011. http://oehha.ca.gov/air/hotspots/2009/AppendixA.pdf
OEHHA Acute and Chronic Reference Exposure Levels (RELs) as of August 2013. http://oehha.ca.gov/air/allrel/html

Notes: Assumed hydrogen sulfide would be controlled to 90% efficiency with scrubbers or biofilters that are part of the odor control system.
Cancer risk less than 10 in a million is considered less than significant.
Chronic and acute non-cancer risks less than 1 are considered less than significant.

Compounds	Cancer Potency Factor	Calculated dose (mg/kg-day)
Ammonia	-	-
Benzene	1.00E-01	3.49E-14
Chloroform	1.90E-02	4.88E-13
Ethyl Benzene	8.70E-03	1.36E-13
Hydrogen Sulfide	-	-
1,1,1-TCA	-	-
Methylene Chlorine	3.50E-03	4.70E-13
1,4-Dichlorobenzene	4.00E-02	2.80E-13
Phenol	-	-
Styrene	-	-
Toluene	-	-
TCE	7.00E-03	1.57E-13
Xylene	-	-

Values	Variables
365	Exposure frequency (EF)
70	Exposure duration (ED)
25550	Averaging time (AT)
302	Daily breathing rate (DBR)
1	Inhalation absorption factor (A)
1.00E-03	Micrograms to milligrams conversion
1.00E-03	liters to cubic meters conversion
3.02E-04	Calculated exposure duration period
1.00E+06	risk per million people

Table 1 Parameters Used in HARP Dispersion Modeling

Modeling Parameter	Values Used in Model
Emisison rate	1 grams per second
1-hour average to annual average persistence factor	0.1
Stack height	12.8 meters (42 feet)
Stack diameter	0.91 meters (3 feet)
Stack exit velocity	3.66 meters per second (10 feet per second)
Stack gas exit temperature	294.3 Kelvin
Land use	Rural

Appendix H

OFF-SITE PIPELINE EMISSION CALCULATIONS DATA

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Valiano - Sewer Option: Harmony Grove Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.0	16.0	26.9	2.1	1.4	0.7	1.4	1.3	0.1	3,057.3
Grading/Excavation	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Drainage/Utilities/Sub-Grade	6.5	31.9	56.0	4.1	3.4	0.7	3.2	3.1	0.1	6,140.7
Paving	3.4	17.9	26.9	1.8	1.8	-	1.7	1.7	-	3,234.2
Maximum (pounds/day)	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Total (tons/construction project)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	23.3

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (acres) -> 0
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Valiano - Sewer Option: Harmony Grove Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.4	7.3	12.2	1.0	0.6	0.3	0.7	0.6	0.1	1,389.7
Grading/Excavation	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Drainage/Utilities/Sub-Grade	2.9	14.5	25.4	1.8	1.5	0.3	1.5	1.4	0.1	2,791.2
Paving	1.5	8.2	12.2	0.8	0.8	-	0.8	0.8	-	1,470.1
Maximum (kilograms/day)	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Total (megagrams/construction project)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	21.1

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (hectares) -> 0
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type		
Project Name	Valiano - Sewer Option: Harmony Grove	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.28	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.97	miles
Total Project Area	0.35	acres
Maximum Area Disturbed/Day	0.07	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing		0.03	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		0.13	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		0.08	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.04	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	0.28						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		6
No. of employees: Grading/Excavation		21
No. of employees: Drainage/Utilities/Sub-Grade		15
No. of employees: Paving		11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grading/Excavation (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Paving (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Grading/Excavation (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Paving (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Pounds per day - Grubbing/Land Clearing	0.095	0.116	1.076	0.026	0.011	246.933
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.000	0.000	0.000	0.076
Pounds per day - Grading/Excavation	0.323	0.394	3.658	0.088	0.037	839.571
Tons per const. Period - Grading/Excavation	0.000	0.001	0.005	0.000	0.000	1.164
Pounds per day - Drainage/Utilities/Sub-Grade	0.228	0.278	2.582	0.062	0.026	592.638
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.002	0.000	0.000	0.548
Pounds per day - Paving	0.171	0.208	1.937	0.047	0.020	444.479
Tons per const. Period - Paving	0.000	0.000	0.001	0.000	0.000	0.205
tons per construction period	0.001	0.001	0.009	0.000	0.000	1.993

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Pounds per day - Grubbing/Land Clearing	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.05
Pound per day - Grading/Excavation	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.21
Pound per day - Drainage/Utilities/Subgrade	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.14

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Grading/Excavation		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.07	0.7	0.0	0.1	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Excavators	0.82	5.58	8.93	0.44	0.40	1145.73
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Trenchers	0.59	2.10	4.94	0.39	0.36	376.85
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	2.9	14.9	26.0	1.4	1.3	2662.3
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	0.8

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.23	8.37	13.40	0.66	0.61	1718.59
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	2	Graders	2.13	6.96	20.76	1.17	1.07	1342.05
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.52	3.12	6.51	0.22	0.20	662.62
	2	Scrapers	2.91	14.51	35.39	1.43	1.31	3216.04
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	4	Tractors/Loaders/Backhoes	1.43	6.29	13.08	1.01	0.93	1343.70
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	10.4	49.5	107.5	5.5	5.1	9981.8
	Grading	tons per phase	0.0	0.1	0.1	0.0	0.0	13.8

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.68	3.42	4.38	0.37	0.34	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.51	2.98	3.86	0.27	0.25	487.07
	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.44	2.47	3.19	0.23	0.22	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.22	2.03	2.73	0.15	0.14	372.74
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	1	Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	6.2	29.3	54.9	3.3	3.0	5400.0
	Drainage	tons per phase	0.0	0.0	0.1	0.0	0.0	5.0

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.42	2.84	4.49	0.22	0.21	481.68
	1	Paving Equipment	0.32	2.69	3.53	0.18	0.16	426.30
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	3.2	16.0	26.6	1.8	1.7	2789.7
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	1.3
Total Emissions all Phases (tons per construction period) =>			0.0	0.1	0.2	0.0	0.0	20.9

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Valiano - Sewer Option: HARRF Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.0	16.0	26.9	2.1	1.4	0.7	1.4	1.3	0.1	3,057.3
Grading/Excavation	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Drainage/Utilities/Sub-Grade	6.5	31.9	56.0	4.1	3.4	0.7	3.2	3.1	0.1	6,140.7
Paving	3.4	17.9	26.9	1.8	1.8	-	1.7	1.7	-	3,234.2
Maximum (pounds/day)	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Total (tons/construction project)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	20.0

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (acres) -> 0
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Valiano - Sewer Option: HARRF Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.4	7.3	12.2	1.0	0.6	0.3	0.7	0.6	0.1	1,389.7
Grading/Excavation	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Drainage/Utilities/Sub-Grade	2.9	14.5	25.4	1.8	1.5	0.3	1.5	1.4	0.1	2,791.2
Paving	1.5	8.2	12.2	0.8	0.8	-	0.8	0.8	-	1,470.1
Maximum (kilograms/day)	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Total (megagrams/construction project)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	18.1

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (hectares) -> 0
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type

Project Name	Valiano - Sewer Option: HARRF	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.24	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.86	miles
Total Project Area	0.31	acres
Maximum Area Disturbed/Day	0.07	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing		0.02	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		0.11	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		0.07	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.04	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	0.24						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		6
No. of employees: Grading/Excavation		21
No. of employees: Drainage/Utilities/Sub-Grade		15
No. of employees: Paving		11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grading/Excavation (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Paving (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Grading/Excavation (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Paving (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Pounds per day - Grubbing/Land Clearing	0.095	0.116	1.076	0.026	0.011	246.933
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.000	0.000	0.000	0.065
Pounds per day - Grading/Excavation	0.323	0.394	3.658	0.088	0.037	839.571
Tons per const. Period - Grading/Excavation	0.000	0.000	0.004	0.000	0.000	0.997
Pounds per day - Drainage/Utilities/Sub-Grade	0.228	0.278	2.582	0.062	0.026	592.638
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.002	0.000	0.000	0.469
Pounds per day - Paving	0.171	0.208	1.937	0.047	0.020	444.479
Tons per const. Period - Paving	0.000	0.000	0.001	0.000	0.000	0.176
tons per construction period	0.001	0.001	0.007	0.000	0.000	1.708

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Pounds per day - Grubbing/Land Clearing	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.04
Pound per day - Grading/Excavation	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.18
Pound per day - Drainage/Utilities/Subgrade	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.12

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Grading/Excavation		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.07	0.7	0.0	0.1	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Excavators	0.82	5.58	8.93	0.44	0.40	1145.73
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Trenchers	0.59	2.10	4.94	0.39	0.36	376.85
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	2.9	14.9	26.0	1.4	1.3	2662.3
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	0.7

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.23	8.37	13.40	0.66	0.61	1718.59
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	2	Graders	2.13	6.96	20.76	1.17	1.07	1342.05
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.52	3.12	6.51	0.22	0.20	662.62
	2	Scrapers	2.91	14.51	35.39	1.43	1.31	3216.04
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	4	Tractors/Loaders/Backhoes	1.43	6.29	13.08	1.01	0.93	1343.70
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	10.4	49.5	107.5	5.5	5.1	9981.8
	Grading	tons per phase	0.0	0.1	0.1	0.0	0.0	11.9

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.68	3.42	4.38	0.37	0.34	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.51	2.98	3.86	0.27	0.25	487.07
	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.44	2.47	3.19	0.23	0.22	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.22	2.03	2.73	0.15	0.14	372.74
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	1	Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	6.2	29.3	54.9	3.3	3.0	5400.0
	Drainage	tons per phase	0.0	0.0	0.0	0.0	0.0	4.3

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.42	2.84	4.49	0.22	0.21	481.68
	1	Paving Equipment	0.32	2.69	3.53	0.18	0.16	426.30
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	3.2	16.0	26.6	1.8	1.7	2789.7
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	1.1
Total Emissions all Phases (tons per construction period) =>			0.0	0.1	0.2	0.0	0.0	17.9

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Valiano - Sewer Option: Vallecitos Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.0	16.0	26.9	2.1	1.4	0.7	1.4	1.3	0.1	3,057.3
Grading/Excavation	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Drainage/Utilities/Sub-Grade	6.5	31.9	56.0	4.1	3.4	0.7	3.2	3.1	0.1	6,140.7
Paving	3.4	17.9	26.9	1.8	1.8	-	1.7	1.7	-	3,234.2
Maximum (pounds/day)	10.7	53.2	108.6	6.3	5.6	0.7	5.2	5.1	0.1	10,969.4
Total (tons/construction project)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	15.8

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (acres) -> 0
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Valiano - Sewer Option: Vallecitos Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.4	7.3	12.2	1.0	0.6	0.3	0.7	0.6	0.1	1,389.7
Grading/Excavation	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Drainage/Utilities/Sub-Grade	2.9	14.5	25.4	1.8	1.5	0.3	1.5	1.4	0.1	2,791.2
Paving	1.5	8.2	12.2	0.8	0.8	-	0.8	0.8	-	1,470.1
Maximum (kilograms/day)	4.9	24.2	49.4	2.9	2.5	0.3	2.4	2.3	0.1	4,986.1
Total (megagrams/construction project)	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	14.3

Notes: Project Start Year -> 2016
Project Length (months) -> 0
Total Project Area (hectares) -> 0
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Input Type

Project Name	Valiano - Sewer Option: Vallecitos	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.19	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.65	miles
Total Project Area	0.24	acres
Maximum Area Disturbed/Day	0.07	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing		0.02	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		0.09	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		0.06	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.03	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	0.19						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		6
No. of employees: Grading/Excavation		21
No. of employees: Drainage/Utilities/Sub-Grade		15
No. of employees: Paving		11

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grading/Excavation (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Paving (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Grading/Excavation (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Paving (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Pounds per day - Grubbing/Land Clearing	0.095	0.116	1.076	0.026	0.011	246.933
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.000	0.000	0.000	0.052
Pounds per day - Grading/Excavation	0.323	0.394	3.658	0.088	0.037	839.571
Tons per const. Period - Grading/Excavation	0.000	0.000	0.003	0.000	0.000	0.790
Pounds per day - Drainage/Utilities/Sub-Grade	0.228	0.278	2.582	0.062	0.026	592.638
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.002	0.000	0.000	0.372
Pounds per day - Paving	0.171	0.208	1.937	0.047	0.020	444.479
Tons per const. Period - Paving	0.000	0.000	0.001	0.000	0.000	0.139
tons per construction period	0.001	0.001	0.006	0.000	0.000	1.352

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Pounds per day - Grubbing/Land Clearing	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.03
Pound per day - Grading/Excavation	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.14
Pound per day - Drainage/Utilities/Subgrade	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.09

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Grading/Excavation		0.07	0.7	0.0	0.1	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.07	0.7	0.0	0.1	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	2	Excavators	0.82	5.58	8.93	0.44	0.40	1145.73
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Trenchers	0.59	2.10	4.94	0.39	0.36	376.85
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	2.9	14.9	26.0	1.4	1.3	2662.3
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	0.6

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.23	8.37	13.40	0.66	0.61	1718.59
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
	2	Graders	2.13	6.96	20.76	1.17	1.07	1342.05
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.52	3.12	6.51	0.22	0.20	662.62
	2	Scrapers	2.91	14.51	35.39	1.43	1.31	3216.04
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	4	Tractors/Loaders/Backhoes	1.43	6.29	13.08	1.01	0.93	1343.70
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	10.4	49.5	107.5	5.5	5.1	9981.8
	Grading	tons per phase	0.0	0.0	0.1	0.0	0.0	9.4

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.68	3.42	4.38	0.37	0.34	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.51	2.98	3.86	0.27	0.25	487.07
	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.44	2.47	3.19	0.23	0.22	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.22	2.03	2.73	0.15	0.14	372.74
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	1	Scrapers	1.46	7.25	17.70	0.71	0.66	1608.02
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	6.2	29.3	54.9	3.3	3.0	5400.0
	Drainage	tons per phase	0.0	0.0	0.0	0.0	0.0	3.4

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.42	2.84	4.49	0.22	0.21	481.68
	1	Paving Equipment	0.32	2.69	3.53	0.18	0.16	426.30
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.70	3.02	6.18	0.46	0.42	559.07
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Signal Boards	0.73	2.73	2.64	0.19	0.18	314.87
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.07	4.72	9.81	0.76	0.69	1007.77
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	3.2	16.0	26.6	1.8	1.7	2789.7
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.9
Total Emissions all Phases (tons per construction period) =>			0.0	0.1	0.1	0.0	0.0	14.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET