

# Appendix A

## Air Quality Modeling

**Table 1  
MAXIMUM DAILY CONSTRUCTION EMISSIONS**

Phase	Pollutant Emissions (pounds per day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation	5	48	23	<0.5	21	12
Grading	3	35	18	<0.5	8	5
Trenching	1	10	10	<0.5	7	2
Building Construction	3	24	19	<0.5	2	2
Paving	2	15	15	<0.5	1	1
Architectural Coating	52	2	2	<0.5	<0.5	<0.5
<b>Maximum Daily Emissions</b>	<b>52</b>	<b>48</b>	<b>23</b>	<b>&lt;0.5</b>	<b>21</b>	<b>12</b>
<i>Thresholds</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
<b><i>Significant Impact?</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>

Source: CalEEMod (output data is provided in Appendix A)

Notes: Includes standard fugitive dust reduction measures. Maximum daily ROG emissions occur during the Architectural Coatings phase. All other maximums occur during Site Preparation phase.

**Table 2  
OPERATION DAILY MAXIMUM EMISSIONS – PROPOSED PROJECT**

Emission Source	Pollutant Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	1	1	4	<0.5	<0.5	<0.5
Energy	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vehicular (Mobile)	<0.5	2	5	<0.5	1	<0.5
Sewer Lift Station	1	12	11	<0.5	1	1
<b>TOTAL</b>	<b>3</b>	<b>14</b>	<b>21</b>	<b>&lt;0.5</b>	<b>2</b>	<b>1</b>
<i>Thresholds</i>	<i>75</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>55</i>
<b><i>Significant Impact?</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>	<b><i>No</i></b>

Source: CalEEMod (output data is provided in Appendix A)

**Table 3  
ESTIMATED CONSTRUCTION  
GREENHOUSE GAS EMISSIONS**

Year	Emissions (MT CO <sub>2</sub> e)
Site Preparation	18
Grading	211
Trenching	3
Building Construction	308
Paving	22
Architectural Coating	3
<b>TOTAL<sup>1</sup></b>	<b>564</b>
Amortized Construction Emissions <sup>2</sup>	28

Source: CalEEMod (output data is provided in Appendix A)

<sup>1</sup> The total presented is the sum of the unrounded values.

<sup>2</sup> Construction emissions are amortized over 20 years in accordance with City of San Diego guidance.

**Table 4  
PROJECT OPERATIONAL  
GREENHOUSE GAS EMISSIONS**

<b>Emission Sources</b>	<b>CO<sub>2</sub>e (MT/year)</b>
Area	35
Energy	90
Vehicular (Mobile)	241
Sewer Lift Station	310
Solid Waste	3
Water	20
<i><b>Operational Subtotal</b></i>	<b>698</b>
Amortized Construction Emissions	28
<b>TOTAL OPERATIONAL EMISSIONS</b>	<b>727</b>
<i>Screening Threshold</i>	900
<i>Significant Impact?</i>	<i>No</i>

Source: CalEEMod output data is provided in Appendix A

Emerald Hills - San Diego County, Annual

**Emerald Hills**  
**San Diego County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse High Rise	48.00	Dwelling Unit	7.78	32,829.00	137

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2019
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MW hr)</b>	720.49	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

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Project Characteristics -

Land Use - Lot Acreage (7.78) and SF (32,829) from Buccola Engineering

Construction Phase - Site Prep/Grading/Trenching and Arch. Coating/Paving/Building Const. dates bsaed on information from Garrett Consultants

Off-road Equipment - Trenching equipment assumptions based on typical needs for similar projects

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Material Export (1994 CY) from Buccola Engineering

Energy Use - Electricity for an electric 84HP pump added to operational energy use. An 85HP pump uses 62.6 kW of electricity, or 548,716 kWh/year. This is a additional 11,424.5 kWhr per residential unit for a total of 14651.56 kWhr (11424.5+3227.06)

Area Mitigation -

Energy Mitigation - 25% improvement per updated Title 24 Standards

Water Mitigation - 20% reduction indoor/outdoor Per updated CALGreen standards

Waste Mitigation - 75% reduction per AB 341

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	3/30/2018	10/1/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	8/6/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	9/14/2018
tblConstructionPhase	PhaseEndDate	3/30/2018	9/3/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	4/13/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	9/4/2019
tblConstructionPhase	PhaseStartDate	3/31/2018	9/29/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	4/14/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	8/7/2019
tblConstructionPhase	PhaseStartDate	3/31/2018	4/1/2018
tblEnergyUse	NT24E	3,277.06	14,651.56
tblGrading	MaterialExported	0.00	1,994.00
tblLandUse	BuildingSpaceSquareFeet	48,000.00	32,829.00
tblLandUse	LandUseSquareFeet	48,000.00	32,829.00
tblLandUse	LotAcreage	0.75	7.78
tblOffRoadEquipment	HorsePower	78.00	97.00
tblOffRoadEquipment	LoadFactor	0.50	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2018	2019

## 2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2018	6-30-2018	1.2938	1.2938
2	7-1-2018	9-30-2018	1.0716	1.0716
3	10-1-2018	12-31-2018	0.8886	0.8886
4	1-1-2019	3-31-2019	0.7826	0.7826
5	4-1-2019	6-30-2019	0.7903	0.7903
6	7-1-2019	9-30-2019	1.0052	1.0052
		Highest	1.2938	1.2938

**2.2 Overall Operational**  
**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.2024	0.0630	4.0759	6.7500e-003		0.5232	0.5232		0.5232	0.5232	49.5820	21.3761	70.9581	0.0463	3.9000e-003	73.2785
Energy	2.3000e-003	0.0196	8.3500e-003	1.3000e-004		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	272.1289	272.1289	0.0105	2.4900e-003	273.1338
Mobile	0.0707	0.3160	0.8484	2.6200e-003	0.2114	2.9800e-003	0.2144	0.0566	2.8100e-003	0.0594	0.0000	240.5320	240.5320	0.0136	0.0000	240.8715
Waste						0.0000	0.0000		0.0000	0.0000	4.4820	0.0000	4.4820	0.2649	0.0000	11.1041
Water						0.0000	0.0000		0.0000	0.0000	0.9922	20.4669	21.4591	0.1027	2.5800e-003	24.7952
<b>Total</b>	<b>3.2753</b>	<b>0.3986</b>	<b>4.9327</b>	<b>9.5000e-003</b>	<b>0.2114</b>	<b>0.5278</b>	<b>0.7392</b>	<b>0.0566</b>	<b>0.5276</b>	<b>0.5842</b>	<b>55.0562</b>	<b>554.5039</b>	<b>609.5601</b>	<b>0.4380</b>	<b>8.9700e-003</b>	<b>623.1830</b>



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**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1905	4.1500e-003	0.3582	2.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	0.5822	0.5822	5.7000e-004	0.0000	0.5965
Energy	1.9900e-003	0.0170	7.2400e-003	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	268.1585	268.1585	0.0104	2.4300e-003	269.1422
Mobile	0.0707	0.3160	0.8484	2.6200e-003	0.2114	2.9800e-003	0.2144	0.0566	2.8100e-003	0.0594	0.0000	240.5320	240.5320	0.0136	0.0000	240.8715
Waste						0.0000	0.0000		0.0000	0.0000	1.1205	0.0000	1.1205	0.0662	0.0000	2.7760
Water						0.0000	0.0000		0.0000	0.0000	0.7937	16.3735	17.1672	0.0822	2.0600e-003	19.8361
<b>Total</b>	<b>0.2632</b>	<b>0.3372</b>	<b>1.2139</b>	<b>2.7500e-003</b>	<b>0.2114</b>	<b>6.3200e-003</b>	<b>0.2177</b>	<b>0.0566</b>	<b>6.1500e-003</b>	<b>0.0628</b>	<b>1.9143</b>	<b>525.6462</b>	<b>527.5605</b>	<b>0.1729</b>	<b>4.4900e-003</b>	<b>533.2223</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>91.96</b>	<b>15.41</b>	<b>75.39</b>	<b>71.05</b>	<b>0.00</b>	<b>98.80</b>	<b>70.55</b>	<b>0.00</b>	<b>98.83</b>	<b>89.26</b>	<b>96.52</b>	<b>5.20</b>	<b>13.45</b>	<b>60.52</b>	<b>49.94</b>	<b>14.44</b>

**3.0 Construction Detail**

**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2018	4/13/2018	5	10	
2	Grading	Grading	4/14/2018	9/14/2018	5	20	
3	Building Construction	Building Construction	9/29/2018	8/6/2019	5	230	
4	Paving	Paving	8/7/2019	9/3/2019	5	20	
5	Architectural Coating	Architectural Coating	9/4/2019	10/1/2019	5	20	
6	Trenching	Trenching	9/15/2018	9/28/2018	5	10	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 0**

**Residential Indoor: 66,479; Residential Outdoor: 22,160; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

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

**Trips and VMT**

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	35.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	249.00	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152
<b>Total</b>	<b>0.0228</b>	<b>0.2410</b>	<b>0.1124</b>	<b>1.9000e-004</b>	<b>0.0903</b>	<b>0.0129</b>	<b>0.1032</b>	<b>0.0497</b>	<b>0.0119</b>	<b>0.0615</b>	<b>0.0000</b>	<b>17.3800</b>	<b>17.3800</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>17.5152</b>

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**3.2 Site Preparation - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	2.9200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6946	0.6946	2.0000e-005	0.0000	0.6952
<b>Total</b>	<b>3.8000e-004</b>	<b>3.0000e-004</b>	<b>2.9200e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6946</b>	<b>0.6946</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6952</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152
<b>Total</b>	<b>0.0228</b>	<b>0.2410</b>	<b>0.1124</b>	<b>1.9000e-004</b>	<b>0.0903</b>	<b>0.0129</b>	<b>0.1032</b>	<b>0.0497</b>	<b>0.0119</b>	<b>0.0615</b>	<b>0.0000</b>	<b>17.3799</b>	<b>17.3799</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>17.5152</b>

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**3.2 Site Preparation - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	2.9200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6946	0.6946	2.0000e-005	0.0000	0.6952
<b>Total</b>	<b>3.8000e-004</b>	<b>3.0000e-004</b>	<b>2.9200e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6946</b>	<b>0.6946</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6952</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3612	0.0000	0.3612	0.1853	0.0000	0.1853	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1525	1.6870	0.9117	1.6300e-003		0.0853	0.0853		0.0785	0.0785	0.0000	149.0878	149.0878	0.0464	0.0000	150.2481
<b>Total</b>	<b>0.1525</b>	<b>1.6870</b>	<b>0.9117</b>	<b>1.6300e-003</b>	<b>0.3612</b>	<b>0.0853</b>	<b>0.4465</b>	<b>0.1853</b>	<b>0.0785</b>	<b>0.2638</b>	<b>0.0000</b>	<b>149.0878</b>	<b>149.0878</b>	<b>0.0464</b>	<b>0.0000</b>	<b>150.2481</b>

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**3.3 Grading - 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	tons/yr										MT/yr					
Hauling	6.3400e-003	0.2223	0.0464	5.5000e-004	4.5100e-003	8.7000e-004	5.3800e-003	1.4500e-003	8.3000e-004	2.2800e-003	0.0000	53.9606	53.9606	4.8700e-003	0.0000	54.0823
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.7900e-003	0.0268	7.0000e-005	6.6200e-003	5.0000e-005	6.6600e-003	1.7600e-003	4.0000e-005	1.8000e-003	0.0000	6.3672	6.3672	2.2000e-004	0.0000	6.3726
<b>Total</b>	<b>9.8700e-003</b>	<b>0.2251</b>	<b>0.0732</b>	<b>6.2000e-004</b>	<b>0.0111</b>	<b>9.2000e-004</b>	<b>0.0120</b>	<b>3.2100e-003</b>	<b>8.7000e-004</b>	<b>4.0800e-003</b>	<b>0.0000</b>	<b>60.3277</b>	<b>60.3277</b>	<b>5.0900e-003</b>	<b>0.0000</b>	<b>60.4549</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3612	0.0000	0.3612	0.1853	0.0000	0.1853	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1525	1.6870	0.9117	1.6300e-003		0.0853	0.0853		0.0785	0.0785	0.0000	149.0876	149.0876	0.0464	0.0000	150.2480
<b>Total</b>	<b>0.1525</b>	<b>1.6870</b>	<b>0.9117</b>	<b>1.6300e-003</b>	<b>0.3612</b>	<b>0.0853</b>	<b>0.4465</b>	<b>0.1853</b>	<b>0.0785</b>	<b>0.2638</b>	<b>0.0000</b>	<b>149.0876</b>	<b>149.0876</b>	<b>0.0464</b>	<b>0.0000</b>	<b>150.2480</b>

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**3.3 Grading - 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	tons/yr										MT/yr					
Hauling	6.3400e-003	0.2223	0.0464	5.5000e-004	4.5100e-003	8.7000e-004	5.3800e-003	1.4500e-003	8.3000e-004	2.2800e-003	0.0000	53.9606	53.9606	4.8700e-003	0.0000	54.0823
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.7900e-003	0.0268	7.0000e-005	6.6200e-003	5.0000e-005	6.6600e-003	1.7600e-003	4.0000e-005	1.8000e-003	0.0000	6.3672	6.3672	2.2000e-004	0.0000	6.3726
<b>Total</b>	<b>9.8700e-003</b>	<b>0.2251</b>	<b>0.0732</b>	<b>6.2000e-004</b>	<b>0.0111</b>	<b>9.2000e-004</b>	<b>0.0120</b>	<b>3.2100e-003</b>	<b>8.7000e-004</b>	<b>4.0800e-003</b>	<b>0.0000</b>	<b>60.3277</b>	<b>60.3277</b>	<b>5.0900e-003</b>	<b>0.0000</b>	<b>60.4549</b>

**3.4 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0884	0.7719	0.5802	8.9000e-004		0.0495	0.0495		0.0465	0.0465	0.0000	78.4632	78.4632	0.0192	0.0000	78.9438
<b>Total</b>	<b>0.0884</b>	<b>0.7719</b>	<b>0.5802</b>	<b>8.9000e-004</b>		<b>0.0495</b>	<b>0.0495</b>		<b>0.0465</b>	<b>0.0465</b>	<b>0.0000</b>	<b>78.4632</b>	<b>78.4632</b>	<b>0.0192</b>	<b>0.0000</b>	<b>78.9438</b>



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**3.4 Building Construction - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.7000e-004	0.0220	6.0600e-003	5.0000e-005	1.1000e-003	1.7000e-004	1.2700e-003	3.2000e-004	1.6000e-004	4.8000e-004	0.0000	4.4164	4.4164	3.6000e-004	0.0000	4.4255
Worker	4.9400e-003	3.9100e-003	0.0375	1.0000e-004	9.2600e-003	7.0000e-005	9.3300e-003	2.4600e-003	6.0000e-005	2.5200e-003	0.0000	8.9140	8.9140	3.1000e-004	0.0000	8.9217
<b>Total</b>	<b>5.8100e-003</b>	<b>0.0259</b>	<b>0.0436</b>	<b>1.5000e-004</b>	<b>0.0104</b>	<b>2.4000e-004</b>	<b>0.0106</b>	<b>2.7800e-003</b>	<b>2.2000e-004</b>	<b>3.0000e-003</b>	<b>0.0000</b>	<b>13.3304</b>	<b>13.3304</b>	<b>6.7000e-004</b>	<b>0.0000</b>	<b>13.3472</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0884	0.7719	0.5802	8.9000e-004		0.0495	0.0495		0.0465	0.0465	0.0000	78.4631	78.4631	0.0192	0.0000	78.9437
<b>Total</b>	<b>0.0884</b>	<b>0.7719</b>	<b>0.5802</b>	<b>8.9000e-004</b>		<b>0.0495</b>	<b>0.0495</b>		<b>0.0465</b>	<b>0.0465</b>	<b>0.0000</b>	<b>78.4631</b>	<b>78.4631</b>	<b>0.0192</b>	<b>0.0000</b>	<b>78.9437</b>

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**3.4 Building Construction - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.7000e-004	0.0220	6.0600e-003	5.0000e-005	1.1000e-003	1.7000e-004	1.2700e-003	3.2000e-004	1.6000e-004	4.8000e-004	0.0000	4.4164	4.4164	3.6000e-004	0.0000	4.4255
Worker	4.9400e-003	3.9100e-003	0.0375	1.0000e-004	9.2600e-003	7.0000e-005	9.3300e-003	2.4600e-003	6.0000e-005	2.5200e-003	0.0000	8.9140	8.9140	3.1000e-004	0.0000	8.9217
<b>Total</b>	<b>5.8100e-003</b>	<b>0.0259</b>	<b>0.0436</b>	<b>1.5000e-004</b>	<b>0.0104</b>	<b>2.4000e-004</b>	<b>0.0106</b>	<b>2.7800e-003</b>	<b>2.2000e-004</b>	<b>3.0000e-003</b>	<b>0.0000</b>	<b>13.3304</b>	<b>13.3304</b>	<b>6.7000e-004</b>	<b>0.0000</b>	<b>13.3472</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1842	1.6442	1.3388	2.1000e-003		0.1006	0.1006		0.0946	0.0946	0.0000	183.3813	183.3813	0.0447	0.0000	184.4981
<b>Total</b>	<b>0.1842</b>	<b>1.6442</b>	<b>1.3388</b>	<b>2.1000e-003</b>		<b>0.1006</b>	<b>0.1006</b>		<b>0.0946</b>	<b>0.0946</b>	<b>0.0000</b>	<b>183.3813</b>	<b>183.3813</b>	<b>0.0447</b>	<b>0.0000</b>	<b>184.4981</b>

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**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8300e-003	0.0490	0.0132	1.1000e-004	2.5900e-003	3.4000e-004	2.9300e-003	7.5000e-004	3.2000e-004	1.0700e-003	0.0000	10.3614	10.3614	8.3000e-004	0.0000	10.3822
Worker	0.0108	8.2600e-003	0.0799	2.3000e-004	0.0219	1.6000e-004	0.0221	5.8200e-003	1.5000e-004	5.9600e-003	0.0000	20.4340	20.4340	6.6000e-004	0.0000	20.4504
<b>Total</b>	<b>0.0126</b>	<b>0.0572</b>	<b>0.0930</b>	<b>3.4000e-004</b>	<b>0.0245</b>	<b>5.0000e-004</b>	<b>0.0250</b>	<b>6.5700e-003</b>	<b>4.7000e-004</b>	<b>7.0300e-003</b>	<b>0.0000</b>	<b>30.7954</b>	<b>30.7954</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>30.8326</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1842	1.6441	1.3388	2.1000e-003		0.1006	0.1006		0.0946	0.0946	0.0000	183.3811	183.3811	0.0447	0.0000	184.4979
<b>Total</b>	<b>0.1842</b>	<b>1.6441</b>	<b>1.3388</b>	<b>2.1000e-003</b>		<b>0.1006</b>	<b>0.1006</b>		<b>0.0946</b>	<b>0.0946</b>	<b>0.0000</b>	<b>183.3811</b>	<b>183.3811</b>	<b>0.0447</b>	<b>0.0000</b>	<b>184.4979</b>

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**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8300e-003	0.0490	0.0132	1.1000e-004	2.5900e-003	3.4000e-004	2.9300e-003	7.5000e-004	3.2000e-004	1.0700e-003	0.0000	10.3614	10.3614	8.3000e-004	0.0000	10.3822
Worker	0.0108	8.2600e-003	0.0799	2.3000e-004	0.0219	1.6000e-004	0.0221	5.8200e-003	1.5000e-004	5.9600e-003	0.0000	20.4340	20.4340	6.6000e-004	0.0000	20.4504
<b>Total</b>	<b>0.0126</b>	<b>0.0572</b>	<b>0.0930</b>	<b>3.4000e-004</b>	<b>0.0245</b>	<b>5.0000e-004</b>	<b>0.0250</b>	<b>6.5700e-003</b>	<b>4.7000e-004</b>	<b>7.0300e-003</b>	<b>0.0000</b>	<b>30.7954</b>	<b>30.7954</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>30.8326</b>

**3.5 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	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0145</b>	<b>0.1524</b>	<b>0.1467</b>	<b>2.3000e-004</b>		<b>8.2500e-003</b>	<b>8.2500e-003</b>		<b>7.5900e-003</b>	<b>7.5900e-003</b>	<b>0.0000</b>	<b>20.4752</b>	<b>20.4752</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.6371</b>

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**3.5 Paving - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
<b>Total</b>	<b>5.9000e-004</b>	<b>4.5000e-004</b>	<b>4.3900e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.1227</b>	<b>1.1227</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.1237</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0145</b>	<b>0.1524</b>	<b>0.1467</b>	<b>2.3000e-004</b>		<b>8.2500e-003</b>	<b>8.2500e-003</b>		<b>7.5900e-003</b>	<b>7.5900e-003</b>	<b>0.0000</b>	<b>20.4752</b>	<b>20.4752</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.6371</b>

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**3.5 Paving - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
<b>Total</b>	<b>5.9000e-004</b>	<b>4.5000e-004</b>	<b>4.3900e-003</b>	<b>1.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>1.1227</b>	<b>1.1227</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.1237</b>

**3.6 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	tons/yr										MT/yr					
Archit. Coating	0.5136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
<b>Total</b>	<b>0.5162</b>	<b>0.0184</b>	<b>0.0184</b>	<b>3.0000e-005</b>		<b>1.2900e-003</b>	<b>1.2900e-003</b>		<b>1.2900e-003</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>2.5587</b>

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**3.6 Architectural Coating - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0500e-003	1.0000e-005	5.6000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5240	0.5240	2.0000e-005	0.0000	0.5244
<b>Total</b>	<b>2.8000e-004</b>	<b>2.1000e-004</b>	<b>2.0500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.5240</b>	<b>0.5240</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.5244</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
<b>Total</b>	<b>0.5162</b>	<b>0.0184</b>	<b>0.0184</b>	<b>3.0000e-005</b>		<b>1.2900e-003</b>	<b>1.2900e-003</b>		<b>1.2900e-003</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>2.5586</b>

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**3.6 Architectural Coating - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0500e-003	1.0000e-005	5.6000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5240	0.5240	2.0000e-005	0.0000	0.5244
<b>Total</b>	<b>2.8000e-004</b>	<b>2.1000e-004</b>	<b>2.0500e-003</b>	<b>1.0000e-005</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>5.7000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.5240</b>	<b>0.5240</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.5244</b>

**3.7 Trenching - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9700e-003	0.0278	0.0208	3.0000e-005		2.0500e-003	2.0500e-003		1.8900e-003	1.8900e-003	0.0000	2.4717	2.4717	7.7000e-004	0.0000	2.4909
<b>Total</b>	<b>2.9700e-003</b>	<b>0.0278</b>	<b>0.0208</b>	<b>3.0000e-005</b>		<b>2.0500e-003</b>	<b>2.0500e-003</b>		<b>1.8900e-003</b>	<b>1.8900e-003</b>	<b>0.0000</b>	<b>2.4717</b>	<b>2.4717</b>	<b>7.7000e-004</b>	<b>0.0000</b>	<b>2.4909</b>



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**3.7 Trenching - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.1000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1931
<b>Total</b>	<b>1.1000e-004</b>	<b>8.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1929</b>	<b>0.1929</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1931</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9700e-003	0.0278	0.0208	3.0000e-005		2.0500e-003	2.0500e-003		1.8900e-003	1.8900e-003	0.0000	2.4717	2.4717	7.7000e-004	0.0000	2.4909
<b>Total</b>	<b>2.9700e-003</b>	<b>0.0278</b>	<b>0.0208</b>	<b>3.0000e-005</b>		<b>2.0500e-003</b>	<b>2.0500e-003</b>		<b>1.8900e-003</b>	<b>1.8900e-003</b>	<b>0.0000</b>	<b>2.4717</b>	<b>2.4717</b>	<b>7.7000e-004</b>	<b>0.0000</b>	<b>2.4909</b>

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**3.7 Trenching - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.1000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1931
<b>Total</b>	<b>1.1000e-004</b>	<b>8.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1929</b>	<b>0.1929</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1931</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Emerald Hills - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0707	0.3160	0.8484	2.6200e-003	0.2114	2.9800e-003	0.2144	0.0566	2.8100e-003	0.0594	0.0000	240.5320	240.5320	0.0136	0.0000	240.8715
Unmitigated	0.0707	0.3160	0.8484	2.6200e-003	0.2114	2.9800e-003	0.2144	0.0566	2.8100e-003	0.0594	0.0000	240.5320	240.5320	0.0136	0.0000	240.8715

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	200.64	206.88	164.64	560,749	560,749
Total	200.64	206.88	164.64	560,749	560,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

Emerald Hills - San Diego County, Annual

**5.1 Mitigation Measures Energy**

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	248.4456	248.4456	0.0100	2.0700e-003	249.3122
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	249.4140	249.4140	0.0100	2.0800e-003	250.2840
NaturalGas Mitigated	1.9900e-003	0.0170	7.2400e-003	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7129	19.7129	3.8000e-004	3.6000e-004	19.8300
NaturalGas Unmitigated	2.3000e-003	0.0196	8.3500e-003	1.3000e-004		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	22.7149	22.7149	4.4000e-004	4.2000e-004	22.8499

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	425661	2.3000e-003	0.0196	8.3500e-003	1.3000e-004		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	22.7149	22.7149	4.4000e-004	4.2000e-004	22.8499
<b>Total</b>		<b>2.3000e-003</b>	<b>0.0196</b>	<b>8.3500e-003</b>	<b>1.3000e-004</b>		<b>1.5900e-003</b>	<b>1.5900e-003</b>		<b>1.5900e-003</b>	<b>1.5900e-003</b>	<b>0.0000</b>	<b>22.7149</b>	<b>22.7149</b>	<b>4.4000e-004</b>	<b>4.2000e-004</b>	<b>22.8499</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	369405	1.9900e-003	0.0170	7.2400e-003	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7129	19.7129	3.8000e-004	3.6000e-004	19.8300
<b>Total</b>		<b>1.9900e-003</b>	<b>0.0170</b>	<b>7.2400e-003</b>	<b>1.1000e-004</b>		<b>1.3800e-003</b>	<b>1.3800e-003</b>		<b>1.3800e-003</b>	<b>1.3800e-003</b>	<b>0.0000</b>	<b>19.7129</b>	<b>19.7129</b>	<b>3.8000e-004</b>	<b>3.6000e-004</b>	<b>19.8300</b>

Emerald Hills - San Diego County, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	763180	249.4140	0.0100	2.0800e-003	250.2840
<b>Total</b>		<b>249.4140</b>	<b>0.0100</b>	<b>2.0800e-003</b>	<b>250.2840</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	760217	248.4456	0.0100	2.0700e-003	249.3122
<b>Total</b>		<b>248.4456</b>	<b>0.0100</b>	<b>2.0700e-003</b>	<b>249.3122</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1905	4.1500e-003	0.3582	2.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	0.5822	0.5822	5.7000e-004	0.0000	0.5965
Unmitigated	3.2024	0.0630	4.0759	6.7500e-003		0.5232	0.5232		0.5232	0.5232	49.5820	21.3761	70.9581	0.0463	3.9000e-003	73.2785

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0118	0.0588	3.7178	6.7400e-003		0.5213	0.5213		0.5213	0.5213	49.5820	20.7940	70.3759	0.0458	3.9000e-003	72.6820
Landscaping	0.0110	4.1500e-003	0.3582	2.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	0.5822	0.5822	5.7000e-004	0.0000	0.5965
<b>Total</b>	<b>3.2024</b>	<b>0.0630</b>	<b>4.0759</b>	<b>6.7600e-003</b>		<b>0.5232</b>	<b>0.5232</b>		<b>0.5232</b>	<b>0.5232</b>	<b>49.5820</b>	<b>21.3761</b>	<b>70.9581</b>	<b>0.0463</b>	<b>3.9000e-003</b>	<b>73.2785</b>

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**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0110	4.1500e-003	0.3582	2.0000e-005		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	0.5822	0.5822	5.7000e-004	0.0000	0.5965
<b>Total</b>	<b>0.1905</b>	<b>4.1500e-003</b>	<b>0.3582</b>	<b>2.0000e-005</b>		<b>1.9600e-003</b>	<b>1.9600e-003</b>		<b>1.9600e-003</b>	<b>1.9600e-003</b>	<b>0.0000</b>	<b>0.5822</b>	<b>0.5822</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>0.5965</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy



Emerald Hills - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.1672	0.0822	2.0600e-003	19.8361
Unmitigated	21.4591	0.1027	2.5800e-003	24.7952

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	3.12739 / 1.97162	21.4591	0.1027	2.5800e-003	24.7952
<b>Total</b>		<b>21.4591</b>	<b>0.1027</b>	<b>2.5800e-003</b>	<b>24.7952</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	2.50191 / 1.57729	17.1672	0.0822	2.0600e-003	19.8361
<b>Total</b>		<b>17.1672</b>	<b>0.0822</b>	<b>2.0600e-003</b>	<b>19.8361</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Emerald Hills - San Diego County, Annual

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.1205	0.0662	0.0000	2.7760
Unmitigated	4.4820	0.2649	0.0000	11.1041

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	22.08	4.4820	0.2649	0.0000	11.1041
<b>Total</b>		<b>4.4820</b>	<b>0.2649</b>	<b>0.0000</b>	<b>11.1041</b>

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**8.2 Waste by Land Use**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	5.52	1.1205	0.0662	0.0000	2.7760
<b>Total</b>		<b>1.1205</b>	<b>0.0662</b>	<b>0.0000</b>	<b>2.7760</b>

**9.0 Operational Offroad**

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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**11.0 Vegetation**

Emerald Hills - San Diego County, Annual

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Emerald Hills - San Diego County, Winter

**Emerald Hills**  
**San Diego County, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse High Rise	48.00	Dwelling Unit	7.78	32,829.00	137

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2019
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Emerald Hills - San Diego County, Winter

Project Characteristics -

Land Use - Lot Acreage (7.78) and SF (32,829) from Buccola Engineering

Construction Phase - Site Prep/Grading/Trenching and Arch. Coating/Paving/Building Const. dates based on information from Garrett Consultants

Off-road Equipment - Trenching equipment assumptions based on typical needs for similar projects

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Material Export (1994 CY) from Buccola Engineering

Energy Use - Electricity for an electric 84HP pump added to operational energy use. An 85HP pump uses 62.6 kW of electricity, or 548,716 kWh/year. This is an additional 11,424.5 kWhr per residential unit for a total of 14651.56 kWhr (11424.5+3227.06)

Area Mitigation -

Energy Mitigation - 25% improvement per updated Title 24 Standards

Water Mitigation - 20% reduction indoor/outdoor Per updated CALGreen standards

Waste Mitigation - 75% reduction per AB 341

## Emerald Hills - San Diego County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	3/30/2018	10/1/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	8/6/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	9/14/2018
tblConstructionPhase	PhaseEndDate	3/30/2018	9/3/2019
tblConstructionPhase	PhaseEndDate	3/30/2018	4/13/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	9/4/2019
tblConstructionPhase	PhaseStartDate	3/31/2018	9/29/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	4/14/2018
tblConstructionPhase	PhaseStartDate	3/31/2018	8/7/2019
tblConstructionPhase	PhaseStartDate	3/31/2018	4/1/2018
tblEnergyUse	NT24E	3,277.06	14,651.56
tblGrading	MaterialExported	0.00	1,994.00
tblLandUse	BuildingSpaceSquareFeet	48,000.00	32,829.00
tblLandUse	LandUseSquareFeet	48,000.00	32,829.00
tblLandUse	LotAcreage	0.75	7.78
tblOffRoadEquipment	HorsePower	78.00	97.00
tblOffRoadEquipment	LoadFactor	0.50	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	OperationalYear	2018	2019

## 2.0 Emissions Summary

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Emerald Hills - San Diego County, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	74.5647	1.4807	94.6568	0.1645		12.7356	12.7356		12.7356	12.7356	1,333.043 1	566.1893	1,899.232 4	1.2372	0.1049	1,961.408 3
Energy	0.0126	0.1075	0.0457	6.9000e-004		8.6900e-003	8.6900e-003		8.6900e-003	8.6900e-003		137.1992	137.1992	2.6300e-003	2.5200e-003	138.0146
Mobile	0.4198	1.8248	4.9691	0.0150	1.2528	0.0174	1.2702	0.3349	0.0164	0.3513		1,520.736 6	1,520.736 6	0.0875		1,522.924 1
<b>Total</b>	<b>74.9971</b>	<b>3.4129</b>	<b>99.6716</b>	<b>0.1802</b>	<b>1.2528</b>	<b>12.7617</b>	<b>14.0145</b>	<b>0.3349</b>	<b>12.7606</b>	<b>13.0955</b>	<b>1,333.043 1</b>	<b>2,224.125 2</b>	<b>3,557.168 3</b>	<b>1.3273</b>	<b>0.1074</b>	<b>3,622.346 9</b>

**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	1.1058	0.0461	3.9797	2.1000e-004		0.0218	0.0218		0.0218	0.0218	0.0000	7.1305	7.1305	7.0000e-003	0.0000	7.3055
Energy	0.0109	0.0933	0.0397	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003		119.0670	119.0670	2.2800e-003	2.1800e-003	119.7746
Mobile	0.4198	1.8248	4.9691	0.0150	1.2528	0.0174	1.2702	0.3349	0.0164	0.3513		1,520.736 6	1,520.736 6	0.0875		1,522.924 1
<b>Total</b>	<b>1.5364</b>	<b>1.9642</b>	<b>8.9885</b>	<b>0.0158</b>	<b>1.2528</b>	<b>0.0467</b>	<b>1.2995</b>	<b>0.3349</b>	<b>0.0457</b>	<b>0.3806</b>	<b>0.0000</b>	<b>1,646.934 2</b>	<b>1,646.934 2</b>	<b>0.0968</b>	<b>2.1800e-003</b>	<b>1,650.004 2</b>

## Emerald Hills - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	97.95	42.45	90.98	91.23	0.00	99.63	90.73	0.00	99.64	97.09	100.00	25.95	53.70	92.71	97.97	54.45

### 3.0 Construction Detail

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#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2018	4/13/2018	5	10	
2	Grading	Grading	4/14/2018	9/14/2018	5	20	
3	Building Construction	Building Construction	9/29/2018	8/6/2019	5	230	
4	Paving	Paving	8/7/2019	9/3/2019	5	20	
5	Architectural Coating	Architectural Coating	9/4/2019	10/1/2019	5	20	
6	Trenching	Trenching	9/15/2018	9/28/2018	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 66,479; Residential Outdoor: 22,160; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0  
(Architectural Coating – sqft)

#### OffRoad Equipment

## Emerald Hills - San Diego County, Winter

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

**Trips and VMT**

Emerald Hills - San Diego County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	35.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	249.00	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>		<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

Emerald Hills - San Diego County, Winter

**3.2 Site Preparation - 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	0.0866	0.0620	0.5845	1.5200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		151.6189	151.6189	5.2500e-003		151.7503
<b>Total</b>	<b>0.0866</b>	<b>0.0620</b>	<b>0.5845</b>	<b>1.5200e-003</b>	<b>0.1479</b>	<b>1.0600e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.8000e-004</b>	<b>0.0402</b>		<b>151.6189</b>	<b>151.6189</b>	<b>5.2500e-003</b>		<b>151.7503</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
<b>Total</b>	<b>4.5627</b>	<b>48.1988</b>	<b>22.4763</b>	<b>0.0380</b>	<b>18.0663</b>	<b>2.5769</b>	<b>20.6432</b>	<b>9.9307</b>	<b>2.3708</b>	<b>12.3014</b>	<b>0.0000</b>	<b>3,831.6239</b>	<b>3,831.6239</b>	<b>1.1928</b>		<b>3,861.4448</b>

Emerald Hills - San Diego County, Winter

**3.2 Site Preparation - 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	0.0866	0.0620	0.5845	1.5200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		151.6189	151.6189	5.2500e-003		151.7503
<b>Total</b>	<b>0.0866</b>	<b>0.0620</b>	<b>0.5845</b>	<b>1.5200e-003</b>	<b>0.1479</b>	<b>1.0600e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.8000e-004</b>	<b>0.0402</b>		<b>151.6189</b>	<b>151.6189</b>	<b>5.2500e-003</b>		<b>151.7503</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5664	0.0000	6.5664	3.3696	0.0000	3.3696			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5664</b>	<b>1.5513</b>	<b>8.1177</b>	<b>3.3696</b>	<b>1.4272</b>	<b>4.7968</b>		<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>

Emerald Hills - San Diego County, Winter

**3.3 Grading - 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	0.1172	4.0024	0.8781	9.8500e-003	0.0829	0.0159	0.0988	0.0266	0.0153	0.0418		1,070.9973	1,070.9973	0.0996		1,073.4872
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	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586
<b>Total</b>	<b>0.1894</b>	<b>4.0540</b>	<b>1.3652</b>	<b>0.0111</b>	<b>0.2061</b>	<b>0.0168</b>	<b>0.2229</b>	<b>0.0593</b>	<b>0.0161</b>	<b>0.0753</b>		<b>1,197.3464</b>	<b>1,197.3464</b>	<b>0.1040</b>		<b>1,199.9458</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5664	0.0000	6.5664	3.3696	0.0000	3.3696			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
<b>Total</b>	<b>2.7733</b>	<b>30.6725</b>	<b>16.5770</b>	<b>0.0297</b>	<b>6.5664</b>	<b>1.5513</b>	<b>8.1177</b>	<b>3.3696</b>	<b>1.4272</b>	<b>4.7968</b>	<b>0.0000</b>	<b>2,988.0216</b>	<b>2,988.0216</b>	<b>0.9302</b>		<b>3,011.2769</b>



Emerald Hills - San Diego County, Winter

**3.3 Grading - 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	0.1172	4.0024	0.8781	9.8500e-003	0.0829	0.0159	0.0988	0.0266	0.0153	0.0418		1,070.9973	1,070.9973	0.0996		1,073.4872
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	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586
<b>Total</b>	<b>0.1894</b>	<b>4.0540</b>	<b>1.3652</b>	<b>0.0111</b>	<b>0.2061</b>	<b>0.0168</b>	<b>0.2229</b>	<b>0.0593</b>	<b>0.0161</b>	<b>0.0753</b>		<b>1,197.3464</b>	<b>1,197.3464</b>	<b>0.1040</b>		<b>1,199.9458</b>

**3.4 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
<b>Total</b>	<b>2.6795</b>	<b>23.3900</b>	<b>17.5804</b>	<b>0.0269</b>		<b>1.4999</b>	<b>1.4999</b>		<b>1.4099</b>	<b>1.4099</b>		<b>2,620.9351</b>	<b>2,620.9351</b>	<b>0.6421</b>		<b>2,636.9883</b>

Emerald Hills - San Diego County, Winter

**3.4 Building Construction - 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	0.0269	0.6599	0.1930	1.3600e-003	0.0339	5.2400e-003	0.0391	9.7400e-003	5.0100e-003	0.0148		145.3490	145.3490	0.0126		145.6634
Worker	0.1683	0.1205	1.1365	2.9600e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		294.8146	294.8146	0.0102		295.0700
<b>Total</b>	<b>0.1952</b>	<b>0.7804</b>	<b>1.3295</b>	<b>4.3200e-003</b>	<b>0.3214</b>	<b>7.3100e-003</b>	<b>0.3287</b>	<b>0.0860</b>	<b>6.9200e-003</b>	<b>0.0929</b>		<b>440.1635</b>	<b>440.1635</b>	<b>0.0228</b>		<b>440.7334</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
<b>Total</b>	<b>2.6795</b>	<b>23.3900</b>	<b>17.5804</b>	<b>0.0269</b>		<b>1.4999</b>	<b>1.4999</b>		<b>1.4099</b>	<b>1.4099</b>	<b>0.0000</b>	<b>2,620.9351</b>	<b>2,620.9351</b>	<b>0.6421</b>		<b>2,636.9883</b>

Emerald Hills - San Diego County, Winter

**3.4 Building Construction - 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	0.0269	0.6599	0.1930	1.3600e-003	0.0339	5.2400e-003	0.0391	9.7400e-003	5.0100e-003	0.0148		145.3490	145.3490	0.0126		145.6634
Worker	0.1683	0.1205	1.1365	2.9600e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		294.8146	294.8146	0.0102		295.0700
<b>Total</b>	<b>0.1952</b>	<b>0.7804</b>	<b>1.3295</b>	<b>4.3200e-003</b>	<b>0.3214</b>	<b>7.3100e-003</b>	<b>0.3287</b>	<b>0.0860</b>	<b>6.9200e-003</b>	<b>0.0929</b>		<b>440.1635</b>	<b>440.1635</b>	<b>0.0228</b>		<b>440.7334</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>		<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Emerald Hills - San Diego County, Winter

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0240	0.6204	0.1775	1.3500e-003	0.0339	4.3900e-003	0.0382	9.7400e-003	4.2000e-003	0.0139		144.2501	144.2501	0.0122		144.5540
Worker	0.1554	0.1077	1.0234	2.8700e-003	0.2875	2.0500e-003	0.2896	0.0763	1.8900e-003	0.0782		285.9198	285.9198	9.2300e-003		286.1505
<b>Total</b>	<b>0.1794</b>	<b>0.7282</b>	<b>1.2008</b>	<b>4.2200e-003</b>	<b>0.3214</b>	<b>6.4400e-003</b>	<b>0.3278</b>	<b>0.0860</b>	<b>6.0900e-003</b>	<b>0.0921</b>		<b>430.1699</b>	<b>430.1699</b>	<b>0.0214</b>		<b>430.7045</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>		<b>1.2127</b>	<b>1.2127</b>	<b>0.0000</b>	<b>2,591.5802</b>	<b>2,591.5802</b>	<b>0.6313</b>		<b>2,607.3635</b>

Emerald Hills - San Diego County, Winter

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0240	0.6204	0.1775	1.3500e-003	0.0339	4.3900e-003	0.0382	9.7400e-003	4.2000e-003	0.0139		144.2501	144.2501	0.0122		144.5540
Worker	0.1554	0.1077	1.0234	2.8700e-003	0.2875	2.0500e-003	0.2896	0.0763	1.8900e-003	0.0782		285.9198	285.9198	9.2300e-003		286.1505
<b>Total</b>	<b>0.1794</b>	<b>0.7282</b>	<b>1.2008</b>	<b>4.2200e-003</b>	<b>0.3214</b>	<b>6.4400e-003</b>	<b>0.3278</b>	<b>0.0860</b>	<b>6.0900e-003</b>	<b>0.0921</b>		<b>430.1699</b>	<b>430.1699</b>	<b>0.0214</b>		<b>430.7045</b>

**3.5 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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4544</b>	<b>15.2441</b>	<b>14.6648</b>	<b>0.0228</b>		<b>0.8246</b>	<b>0.8246</b>		<b>0.7586</b>	<b>0.7586</b>		<b>2,257.0025</b>	<b>2,257.0025</b>	<b>0.7141</b>		<b>2,274.8548</b>

Emerald Hills - San Diego County, Winter

**3.5 Paving - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
<b>Total</b>	<b>0.0666</b>	<b>0.0462</b>	<b>0.4386</b>	<b>1.2300e-003</b>	<b>0.1232</b>	<b>8.8000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>122.5371</b>	<b>122.5371</b>	<b>3.9500e-003</b>		<b>122.6359</b>

**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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.4544</b>	<b>15.2441</b>	<b>14.6648</b>	<b>0.0228</b>		<b>0.8246</b>	<b>0.8246</b>		<b>0.7586</b>	<b>0.7586</b>	<b>0.0000</b>	<b>2,257.0025</b>	<b>2,257.0025</b>	<b>0.7141</b>		<b>2,274.8548</b>

Emerald Hills - San Diego County, Winter

**3.5 Paving - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
<b>Total</b>	<b>0.0666</b>	<b>0.0462</b>	<b>0.4386</b>	<b>1.2300e-003</b>	<b>0.1232</b>	<b>8.8000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>122.5371</b>	<b>122.5371</b>	<b>3.9500e-003</b>		<b>122.6359</b>

**3.6 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	51.3552					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		282.0423
<b>Total</b>	<b>51.6217</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

Emerald Hills - San Diego County, Winter

**3.6 Architectural Coating - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0311	0.0215	0.2047	5.7000e-004	0.0575	4.1000e-004	0.0579	0.0153	3.8000e-004	0.0156		57.1840	57.1840	1.8500e-003		57.2301
<b>Total</b>	<b>0.0311</b>	<b>0.0215</b>	<b>0.2047</b>	<b>5.7000e-004</b>	<b>0.0575</b>	<b>4.1000e-004</b>	<b>0.0579</b>	<b>0.0153</b>	<b>3.8000e-004</b>	<b>0.0156</b>		<b>57.1840</b>	<b>57.1840</b>	<b>1.8500e-003</b>		<b>57.2301</b>

**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	51.3552					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	0.0000	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>51.6217</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>



Emerald Hills - San Diego County, Winter

**3.6 Architectural Coating - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0311	0.0215	0.2047	5.7000e-004	0.0575	4.1000e-004	0.0579	0.0153	3.8000e-004	0.0156		57.1840	57.1840	1.8500e-003		57.2301
<b>Total</b>	<b>0.0311</b>	<b>0.0215</b>	<b>0.2047</b>	<b>5.7000e-004</b>	<b>0.0575</b>	<b>4.1000e-004</b>	<b>0.0579</b>	<b>0.0153</b>	<b>3.8000e-004</b>	<b>0.0156</b>		<b>57.1840</b>	<b>57.1840</b>	<b>1.8500e-003</b>		<b>57.2301</b>

**3.7 Trenching - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5949	5.5547	4.1628	5.4100e-003		0.4106	0.4106		0.3777	0.3777		544.9135	544.9135	0.1696		549.1545
<b>Total</b>	<b>0.5949</b>	<b>5.5547</b>	<b>4.1628</b>	<b>5.4100e-003</b>		<b>0.4106</b>	<b>0.4106</b>		<b>0.3777</b>	<b>0.3777</b>		<b>544.9135</b>	<b>544.9135</b>	<b>0.1696</b>		<b>549.1545</b>

Emerald Hills - San Diego County, Winter

**3.7 Trenching - 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	0.0240	0.0172	0.1624	4.2000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1164	42.1164	1.4600e-003		42.1529
<b>Total</b>	<b>0.0240</b>	<b>0.0172</b>	<b>0.1624</b>	<b>4.2000e-004</b>	<b>0.0411</b>	<b>3.0000e-004</b>	<b>0.0414</b>	<b>0.0109</b>	<b>2.7000e-004</b>	<b>0.0112</b>		<b>42.1164</b>	<b>42.1164</b>	<b>1.4600e-003</b>		<b>42.1529</b>

**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	0.5949	5.5547	4.1628	5.4100e-003		0.4106	0.4106		0.3777	0.3777	0.0000	544.9135	544.9135	0.1696		549.1545
<b>Total</b>	<b>0.5949</b>	<b>5.5547</b>	<b>4.1628</b>	<b>5.4100e-003</b>		<b>0.4106</b>	<b>0.4106</b>		<b>0.3777</b>	<b>0.3777</b>	<b>0.0000</b>	<b>544.9135</b>	<b>544.9135</b>	<b>0.1696</b>		<b>549.1545</b>

Emerald Hills - San Diego County, Winter

**3.7 Trenching - 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	0.0240	0.0172	0.1624	4.2000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1164	42.1164	1.4600e-003		42.1529
<b>Total</b>	<b>0.0240</b>	<b>0.0172</b>	<b>0.1624</b>	<b>4.2000e-004</b>	<b>0.0411</b>	<b>3.0000e-004</b>	<b>0.0414</b>	<b>0.0109</b>	<b>2.7000e-004</b>	<b>0.0112</b>		<b>42.1164</b>	<b>42.1164</b>	<b>1.4600e-003</b>		<b>42.1529</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Emerald Hills - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4198	1.8248	4.9691	0.0150	1.2528	0.0174	1.2702	0.3349	0.0164	0.3513		1,520.7366	1,520.7366	0.0875		1,522.9241
Unmitigated	0.4198	1.8248	4.9691	0.0150	1.2528	0.0174	1.2702	0.3349	0.0164	0.3513		1,520.7366	1,520.7366	0.0875		1,522.9241

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	200.64	206.88	164.64	560,749	560,749
Total	200.64	206.88	164.64	560,749	560,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

Emerald Hills - San Diego County, Winter

**5.1 Mitigation Measures Energy**

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0109	0.0933	0.0397	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003		119.0670	119.0670	2.2800e-003	2.1800e-003	119.7746
NaturalGas Unmitigated	0.0126	0.1075	0.0457	6.9000e-004		8.6900e-003	8.6900e-003		8.6900e-003	8.6900e-003		137.1992	137.1992	2.6300e-003	2.5200e-003	138.0146

**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					
Condo/Townhouse High Rise	1166.19	0.0126	0.1075	0.0457	6.9000e-004		8.6900e-003	8.6900e-003		8.6900e-003	8.6900e-003		137.1992	137.1992	2.6300e-003	2.5200e-003	138.0146
<b>Total</b>		<b>0.0126</b>	<b>0.1075</b>	<b>0.0457</b>	<b>6.9000e-004</b>		<b>8.6900e-003</b>	<b>8.6900e-003</b>		<b>8.6900e-003</b>	<b>8.6900e-003</b>		<b>137.1992</b>	<b>137.1992</b>	<b>2.6300e-003</b>	<b>2.5200e-003</b>	<b>138.0146</b>

Emerald Hills - San Diego County, Winter

**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					
Condo/Townhouse High Rise	1.01207	0.0109	0.0933	0.0397	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003		119.0670	119.0670	2.2800e-003	2.1800e-003	119.7746
<b>Total</b>		<b>0.0109</b>	<b>0.0933</b>	<b>0.0397</b>	<b>6.0000e-004</b>		<b>7.5400e-003</b>	<b>7.5400e-003</b>		<b>7.5400e-003</b>	<b>7.5400e-003</b>		<b>119.0670</b>	<b>119.0670</b>	<b>2.2800e-003</b>	<b>2.1800e-003</b>	<b>119.7746</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

No Hearths Installed

Emerald Hills - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1058	0.0461	3.9797	2.1000e-004		0.0218	0.0218		0.0218	0.0218	0.0000	7.1305	7.1305	7.0000e-003	0.0000	7.3055
Unmitigated	74.5647	1.4807	94.6568	0.1645		12.7356	12.7356		12.7356	12.7356	1,333.043 1	566.1893	1,899.232 4	1.2372	0.1049	1,961.408 3

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	0.2814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	73.4590	1.4346	90.6771	0.1643		12.7138	12.7138		12.7138	12.7138	1,333.043 1	559.0588	1,892.101 9	1.2302	0.1049	1,954.102 8
Landscaping	0.1218	0.0461	3.9797	2.1000e-004		0.0218	0.0218		0.0218	0.0218		7.1305	7.1305	7.0000e-003		7.3055
<b>Total</b>	<b>74.5647</b>	<b>1.4807</b>	<b>94.6568</b>	<b>0.1645</b>		<b>12.7356</b>	<b>12.7356</b>		<b>12.7356</b>	<b>12.7356</b>	<b>1,333.043 1</b>	<b>566.1893</b>	<b>1,899.232 4</b>	<b>1.2372</b>	<b>0.1049</b>	<b>1,961.408 3</b>

Emerald Hills - San Diego County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7025					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	0.1218	0.0461	3.9797	2.1000e-004		0.0218	0.0218		0.0218	0.0218		7.1305	7.1305	7.0000e-003		7.3055
<b>Total</b>	<b>1.1058</b>	<b>0.0461</b>	<b>3.9797</b>	<b>2.1000e-004</b>		<b>0.0218</b>	<b>0.0218</b>		<b>0.0218</b>	<b>0.0218</b>	<b>0.0000</b>	<b>7.1305</b>	<b>7.1305</b>	<b>7.0000e-003</b>	<b>0.0000</b>	<b>7.3055</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Emerald Hills - San Diego County, Winter

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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