

**APPENDIX B**  
**AIR QUALITY AND GREENHOUSE GAS TECHNICAL DATA**



**Shelby Residential Project**  
**Santa Barbara-South of Santa Ynez Range County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	60.00	Dwelling Unit	14.38	108,000.00	163

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8			<b>Operational Year</b>	2017
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	630.89	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

## Project Characteristics -

Land Use - Lot acreage of total project site = 14.38 ac

## Construction Phase -

Trips and VMT - 44 peak hour trips due to construction workforce (ATE supplement memo 8-13-13)

Grading - Project site maximum = 14 acres

## Mobile Land Use Mitigation -

## Area Mitigation -

Energy Mitigation - Use of 2013 California Building Code standards would result in 25% reduction in building energy use over 2008 CBC

## Water Mitigation -

## Waste Mitigation -

## Demolition -

## Land Use Change -

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	75.00	14.00
tblGrading	MaterialExported	0.00	4,000.00
tblLandUse	LotAcreage	19.48	14.38
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	22.00	44.00

## 2.0 Emissions Summary

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6048	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431
Energy	9.3400e-003	0.0799	0.0340	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003	0.0000	214.2097	214.2097	7.3700e-003	2.8500e-003	215.2490
Mobile	0.4026	1.0204	4.5068	8.0000e-003	0.5953	0.0115	0.6068	0.1594	0.0106	0.1700	0.0000	613.5104	613.5104	0.0289	0.0000	614.1163
Waste						0.0000	0.0000		0.0000	0.0000	13.5659	0.0000	13.5659	0.8017	0.0000	30.4020
Water						0.0000	0.0000		0.0000	0.0000	1.3831	8.5217	9.9048	5.1500e-003	3.0900e-003	10.9705
<b>Total</b>	<b>1.0167</b>	<b>1.1055</b>	<b>4.9908</b>	<b>8.5300e-003</b>	<b>0.5953</b>	<b>0.0204</b>	<b>0.6157</b>	<b>0.1594</b>	<b>0.0195</b>	<b>0.1789</b>	<b>14.9490</b>	<b>836.9695</b>	<b>851.9185</b>	<b>0.8438</b>	<b>5.9400e-003</b>	<b>871.4808</b>

**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	0.6048	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431
Energy	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	190.0897	190.0897	6.7500e-003	2.4600e-003	190.9944
Mobile	0.4026	1.0204	4.5068	8.0000e-003	0.5953	0.0115	0.6068	0.1594	0.0106	0.1700	0.0000	613.5104	613.5104	0.0289	0.0000	614.1163
Waste						0.0000	0.0000		0.0000	0.0000	6.7829	0.0000	6.7829	0.4009	0.0000	15.2010
Water						0.0000	0.0000		0.0000	0.0000	1.1065	7.1605	8.2669	4.1200e-003	2.4700e-003	9.1191
<b>Total</b>	<b>1.0148</b>	<b>1.0896</b>	<b>4.9840</b>	<b>8.4300e-003</b>	<b>0.5953</b>	<b>0.0191</b>	<b>0.6144</b>	<b>0.1594</b>	<b>0.0182</b>	<b>0.1776</b>	<b>7.8894</b>	<b>811.4882</b>	<b>819.3776</b>	<b>0.4413</b>	<b>4.9300e-003</b>	<b>830.1739</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>0.18</b>	<b>1.44</b>	<b>0.14</b>	<b>1.17</b>	<b>0.00</b>	<b>6.32</b>	<b>0.21</b>	<b>0.00</b>	<b>6.62</b>	<b>0.72</b>	<b>47.22</b>	<b>3.04</b>	<b>3.82</b>	<b>47.70</b>	<b>17.00</b>	<b>4.74</b>

## 2.3 Vegetation

### Vegetation

	CO2e
Category	MT
Vegetation Land Change	-60.3400
<b>Total</b>	<b>-60.3400</b>

## 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	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/11/2016	5	10	
3	Grading	Grading	2/12/2016	3/24/2016	5	30	
4	Building Construction	Building Construction	3/25/2016	5/18/2017	5	300	
5	Paving	Paving	5/19/2017	6/15/2017	5	20	
6	Architectural Coating	Architectural Coating	6/16/2017	7/13/2017	5	20	

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

**Acres of Grading (Grading Phase): 14**

**Acres of Paving: 0**



**Residential Indoor: 218,700; Residential Outdoor: 72,900; 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
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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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	18.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	500.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	44.00	6.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 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	tons/yr										MT/yr					
Fugitive Dust					1.9500e-003	0.0000	1.9500e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0974	37.0974	0.0101	0.0000	37.3092
<b>Total</b>	<b>0.0429</b>	<b>0.4566</b>	<b>0.3503</b>	<b>4.0000e-004</b>	<b>1.9500e-003</b>	<b>0.0229</b>	<b>0.0249</b>	<b>3.0000e-004</b>	<b>0.0214</b>	<b>0.0217</b>	<b>0.0000</b>	<b>37.0974</b>	<b>37.0974</b>	<b>0.0101</b>	<b>0.0000</b>	<b>37.3092</b>

### 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	tons/yr										MT/yr					
Hauling	2.2000e-004	2.8900e-003	2.9600e-003	1.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.6042	0.6042	0.0000	0.0000	0.6043
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	1.0900e-003	9.3100e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1268	1.1268	7.0000e-005	0.0000	1.1283
<b>Total</b>	<b>8.6000e-004</b>	<b>3.9800e-003</b>	<b>0.0123</b>	<b>2.0000e-005</b>	<b>1.5200e-003</b>	<b>5.0000e-005</b>	<b>1.5700e-003</b>	<b>4.0000e-004</b>	<b>4.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.7310</b>	<b>1.7310</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.7326</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					1.9500e-003	0.0000	1.9500e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0973	37.0973	0.0101	0.0000	37.3092
<b>Total</b>	<b>0.0429</b>	<b>0.4566</b>	<b>0.3503</b>	<b>4.0000e-004</b>	<b>1.9500e-003</b>	<b>0.0229</b>	<b>0.0249</b>	<b>3.0000e-004</b>	<b>0.0214</b>	<b>0.0217</b>	<b>0.0000</b>	<b>37.0973</b>	<b>37.0973</b>	<b>0.0101</b>	<b>0.0000</b>	<b>37.3092</b>

**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	tons/yr										MT/yr					
Hauling	2.2000e-004	2.8900e-003	2.9600e-003	1.0000e-005	1.5000e-004	4.0000e-005	1.9000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.6042	0.6042	0.0000	0.0000	0.6043
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	1.0900e-003	9.3100e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1268	1.1268	7.0000e-005	0.0000	1.1283
<b>Total</b>	<b>8.6000e-004</b>	<b>3.9800e-003</b>	<b>0.0123</b>	<b>2.0000e-005</b>	<b>1.5200e-003</b>	<b>5.0000e-005</b>	<b>1.5700e-003</b>	<b>4.0000e-004</b>	<b>4.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.7310</b>	<b>1.7310</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.7326</b>

**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	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	0.0254	0.2732	0.2055	2.0000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	18.4386	18.4386	5.5600e-003	0.0000	18.5554
<b>Total</b>	<b>0.0254</b>	<b>0.2732</b>	<b>0.2055</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0147</b>	<b>0.1050</b>	<b>0.0497</b>	<b>0.0135</b>	<b>0.0632</b>	<b>0.0000</b>	<b>18.4386</b>	<b>18.4386</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.5554</b>

### 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	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	6.6000e-004	5.5900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.6761	0.6761	4.0000e-005	0.0000	0.6770
<b>Total</b>	<b>3.8000e-004</b>	<b>6.6000e-004</b>	<b>5.5900e-003</b>	<b>1.0000e-005</b>	<b>8.2000e-004</b>	<b>1.0000e-005</b>	<b>8.3000e-004</b>	<b>2.2000e-004</b>	<b>1.0000e-005</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.6761</b>	<b>0.6761</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6770</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	0.0254	0.2732	0.2055	2.0000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	18.4385	18.4385	5.5600e-003	0.0000	18.5553
<b>Total</b>	<b>0.0254</b>	<b>0.2732</b>	<b>0.2055</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0147</b>	<b>0.1050</b>	<b>0.0497</b>	<b>0.0135</b>	<b>0.0632</b>	<b>0.0000</b>	<b>18.4385</b>	<b>18.4385</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.5553</b>

### 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	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	6.6000e-004	5.5900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.6761	0.6761	4.0000e-005	0.0000	0.6770
<b>Total</b>	<b>3.8000e-004</b>	<b>6.6000e-004</b>	<b>5.5900e-003</b>	<b>1.0000e-005</b>	<b>8.2000e-004</b>	<b>1.0000e-005</b>	<b>8.3000e-004</b>	<b>2.2000e-004</b>	<b>1.0000e-005</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.6761</b>	<b>0.6761</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.6770</b>

### 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	tons/yr										MT/yr					
Fugitive Dust					0.0981	0.0000	0.0981	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0972	1.1222	0.7371	9.3000e-004		0.0538	0.0538		0.0495	0.0495	0.0000	87.2936	87.2936	0.0263	0.0000	87.8465
<b>Total</b>	<b>0.0972</b>	<b>1.1222</b>	<b>0.7371</b>	<b>9.3000e-004</b>	<b>0.0981</b>	<b>0.0538</b>	<b>0.1518</b>	<b>0.0505</b>	<b>0.0495</b>	<b>0.1000</b>	<b>0.0000</b>	<b>87.2936</b>	<b>87.2936</b>	<b>0.0263</b>	<b>0.0000</b>	<b>87.8465</b>

### 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	tons/yr										MT/yr					
Hauling	6.0100e-003	0.0802	0.0821	1.8000e-004	4.2400e-003	9.8000e-004	5.2300e-003	1.1600e-003	9.0000e-004	2.0700e-003	0.0000	16.7842	16.7842	1.2000e-004	0.0000	16.7867
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	1.2700e-003	2.1800e-003	0.0186	3.0000e-005	2.7400e-003	2.0000e-005	2.7700e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2536	2.2536	1.4000e-004	0.0000	2.2566
<b>Total</b>	<b>7.2800e-003</b>	<b>0.0824</b>	<b>0.1007</b>	<b>2.1000e-004</b>	<b>6.9800e-003</b>	<b>1.0000e-003</b>	<b>8.0000e-003</b>	<b>1.8900e-003</b>	<b>9.2000e-004</b>	<b>2.8200e-003</b>	<b>0.0000</b>	<b>19.0378</b>	<b>19.0378</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>19.0433</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					0.0981	0.0000	0.0981	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0972	1.1222	0.7371	9.3000e-004		0.0538	0.0538		0.0495	0.0495	0.0000	87.2935	87.2935	0.0263	0.0000	87.8464
<b>Total</b>	<b>0.0972</b>	<b>1.1222</b>	<b>0.7371</b>	<b>9.3000e-004</b>	<b>0.0981</b>	<b>0.0538</b>	<b>0.1518</b>	<b>0.0505</b>	<b>0.0495</b>	<b>0.1000</b>	<b>0.0000</b>	<b>87.2935</b>	<b>87.2935</b>	<b>0.0263</b>	<b>0.0000</b>	<b>87.8464</b>

### 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	tons/yr										MT/yr					
Hauling	6.0100e-003	0.0802	0.0821	1.8000e-004	4.2400e-003	9.8000e-004	5.2300e-003	1.1600e-003	9.0000e-004	2.0700e-003	0.0000	16.7842	16.7842	1.2000e-004	0.0000	16.7867
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	1.2700e-003	2.1800e-003	0.0186	3.0000e-005	2.7400e-003	2.0000e-005	2.7700e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2536	2.2536	1.4000e-004	0.0000	2.2566
<b>Total</b>	<b>7.2800e-003</b>	<b>0.0824</b>	<b>0.1007</b>	<b>2.1000e-004</b>	<b>6.9800e-003</b>	<b>1.0000e-003</b>	<b>8.0000e-003</b>	<b>1.8900e-003</b>	<b>9.2000e-004</b>	<b>2.8200e-003</b>	<b>0.0000</b>	<b>19.0378</b>	<b>19.0378</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>19.0433</b>

### 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	tons/yr										MT/yr					
Off-Road	0.3423	2.8649	1.8599	2.6900e-003		0.1977	0.1977		0.1858	0.1858	0.0000	243.3644	243.3644	0.0604	0.0000	244.6319
<b>Total</b>	<b>0.3423</b>	<b>2.8649</b>	<b>1.8599</b>	<b>2.6900e-003</b>		<b>0.1977</b>	<b>0.1977</b>		<b>0.1858</b>	<b>0.1858</b>	<b>0.0000</b>	<b>243.3644</b>	<b>243.3644</b>	<b>0.0604</b>	<b>0.0000</b>	<b>244.6319</b>



### 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	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	6.9500e-003	0.0457	0.0954	9.0000e-005	2.4600e-003	6.1000e-004	3.0700e-003	7.0000e-004	5.6000e-004	1.2600e-003	0.0000	8.3912	8.3912	7.0000e-005	0.0000	8.3927
Worker	0.0188	0.0322	0.2745	4.4000e-004	0.0405	3.1000e-004	0.0408	0.0108	2.9000e-004	0.0110	0.0000	33.2182	33.2182	2.0800e-003	0.0000	33.2620
<b>Total</b>	<b>0.0257</b>	<b>0.0779</b>	<b>0.3699</b>	<b>5.3000e-004</b>	<b>0.0429</b>	<b>9.2000e-004</b>	<b>0.0438</b>	<b>0.0115</b>	<b>8.5000e-004</b>	<b>0.0123</b>	<b>0.0000</b>	<b>41.6094</b>	<b>41.6094</b>	<b>2.1500e-003</b>	<b>0.0000</b>	<b>41.6546</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	0.3423	2.8649	1.8599	2.6900e-003		0.1977	0.1977		0.1858	0.1858	0.0000	243.3641	243.3641	0.0604	0.0000	244.6316
<b>Total</b>	<b>0.3423</b>	<b>2.8649</b>	<b>1.8599</b>	<b>2.6900e-003</b>		<b>0.1977</b>	<b>0.1977</b>		<b>0.1858</b>	<b>0.1858</b>	<b>0.0000</b>	<b>243.3641</b>	<b>243.3641</b>	<b>0.0604</b>	<b>0.0000</b>	<b>244.6316</b>

### 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	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	6.9500e-003	0.0457	0.0954	9.0000e-005	2.4600e-003	6.1000e-004	3.0700e-003	7.0000e-004	5.6000e-004	1.2600e-003	0.0000	8.3912	8.3912	7.0000e-005	0.0000	8.3927
Worker	0.0188	0.0322	0.2745	4.4000e-004	0.0405	3.1000e-004	0.0408	0.0108	2.9000e-004	0.0110	0.0000	33.2182	33.2182	2.0800e-003	0.0000	33.2620
<b>Total</b>	<b>0.0257</b>	<b>0.0779</b>	<b>0.3699</b>	<b>5.3000e-004</b>	<b>0.0429</b>	<b>9.2000e-004</b>	<b>0.0438</b>	<b>0.0115</b>	<b>8.5000e-004</b>	<b>0.0123</b>	<b>0.0000</b>	<b>41.6094</b>	<b>41.6094</b>	<b>2.1500e-003</b>	<b>0.0000</b>	<b>41.6546</b>

### 3.5 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	tons/yr										MT/yr					
Off-Road	0.1536	1.3071	0.8974	1.3300e-003		0.0882	0.0882		0.0828	0.0828	0.0000	118.5422	118.5422	0.0292	0.0000	119.1548
<b>Total</b>	<b>0.1536</b>	<b>1.3071</b>	<b>0.8974</b>	<b>1.3300e-003</b>		<b>0.0882</b>	<b>0.0882</b>		<b>0.0828</b>	<b>0.0828</b>	<b>0.0000</b>	<b>118.5422</b>	<b>118.5422</b>	<b>0.0292</b>	<b>0.0000</b>	<b>119.1548</b>

### 3.5 Building Construction - 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	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	0.0000
Vendor	3.0500e-003	0.0203	0.0439	5.0000e-005	1.2100e-003	2.5000e-004	1.4700e-003	3.5000e-004	2.3000e-004	5.8000e-004	0.0000	4.0662	4.0662	3.0000e-005	0.0000	0.0000	4.0669
Worker	7.8000e-003	0.0139	0.1166	2.2000e-004	0.0199	1.4000e-004	0.0201	5.2900e-003	1.3000e-004	5.4300e-003	0.0000	15.7251	15.7251	9.1000e-004	0.0000	0.0000	15.7443
<b>Total</b>	<b>0.0109</b>	<b>0.0342</b>	<b>0.1604</b>	<b>2.7000e-004</b>	<b>0.0211</b>	<b>3.9000e-004</b>	<b>0.0215</b>	<b>5.6400e-003</b>	<b>3.6000e-004</b>	<b>6.0100e-003</b>	<b>0.0000</b>	<b>19.7914</b>	<b>19.7914</b>	<b>9.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>19.8112</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	0.1536	1.3071	0.8974	1.3300e-003		0.0882	0.0882		0.0828	0.0828	0.0000	118.5420	118.5420	0.0292	0.0000	119.1547
<b>Total</b>	<b>0.1536</b>	<b>1.3071</b>	<b>0.8974</b>	<b>1.3300e-003</b>		<b>0.0882</b>	<b>0.0882</b>		<b>0.0828</b>	<b>0.0828</b>	<b>0.0000</b>	<b>118.5420</b>	<b>118.5420</b>	<b>0.0292</b>	<b>0.0000</b>	<b>119.1547</b>

**3.5 Building Construction - 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0500e-003	0.0203	0.0439	5.0000e-005	1.2100e-003	2.5000e-004	1.4700e-003	3.5000e-004	2.3000e-004	5.8000e-004	0.0000	4.0662	4.0662	3.0000e-005	0.0000	4.0669
Worker	7.8000e-003	0.0139	0.1166	2.2000e-004	0.0199	1.4000e-004	0.0201	5.2900e-003	1.3000e-004	5.4300e-003	0.0000	15.7251	15.7251	9.1000e-004	0.0000	15.7443
<b>Total</b>	<b>0.0109</b>	<b>0.0342</b>	<b>0.1604</b>	<b>2.7000e-004</b>	<b>0.0211</b>	<b>3.9000e-004</b>	<b>0.0215</b>	<b>5.6400e-003</b>	<b>3.6000e-004</b>	<b>6.0100e-003</b>	<b>0.0000</b>	<b>19.7914</b>	<b>19.7914</b>	<b>9.4000e-004</b>	<b>0.0000</b>	<b>19.8112</b>

**3.6 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	tons/yr										MT/yr					
Off-Road	0.0191	0.2030	0.1473	2.2000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	20.6934	20.6934	6.3400e-003	0.0000	20.8266
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>0.0191</b>	<b>0.2030</b>	<b>0.1473</b>	<b>2.2000e-004</b>		<b>0.0114</b>	<b>0.0114</b>		<b>0.0105</b>	<b>0.0105</b>	<b>0.0000</b>	<b>20.6934</b>	<b>20.6934</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.8266</b>

### 3.6 Paving - 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	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	5.4000e-004	9.6000e-004	8.0300e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0830	1.0830	6.0000e-005	0.0000	1.0843
<b>Total</b>	<b>5.4000e-004</b>	<b>9.6000e-004</b>	<b>8.0300e-003</b>	<b>1.0000e-005</b>	<b>1.3700e-003</b>	<b>1.0000e-005</b>	<b>1.3800e-003</b>	<b>3.6000e-004</b>	<b>1.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.0830</b>	<b>1.0830</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0843</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	0.0191	0.2030	0.1473	2.2000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	20.6934	20.6934	6.3400e-003	0.0000	20.8265
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>0.0191</b>	<b>0.2030</b>	<b>0.1473</b>	<b>2.2000e-004</b>		<b>0.0114</b>	<b>0.0114</b>		<b>0.0105</b>	<b>0.0105</b>	<b>0.0000</b>	<b>20.6934</b>	<b>20.6934</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.8265</b>

### 3.6 Paving - 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	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	5.4000e-004	9.6000e-004	8.0300e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0830	1.0830	6.0000e-005	0.0000	1.0843
<b>Total</b>	<b>5.4000e-004</b>	<b>9.6000e-004</b>	<b>8.0300e-003</b>	<b>1.0000e-005</b>	<b>1.3700e-003</b>	<b>1.0000e-005</b>	<b>1.3800e-003</b>	<b>3.6000e-004</b>	<b>1.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.0830</b>	<b>1.0830</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>1.0843</b>

### 3.7 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	tons/yr										MT/yr					
Archit. Coating	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0219	0.0187	3.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
<b>Total</b>	<b>1.6928</b>	<b>0.0219</b>	<b>0.0187</b>	<b>3.0000e-005</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>2.5589</b>

### 3.7 Architectural Coating - 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	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	1.4000e-004	2.6000e-004	2.1400e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2888	0.2888	2.0000e-005	0.0000	0.2892
<b>Total</b>	<b>1.4000e-004</b>	<b>2.6000e-004</b>	<b>2.1400e-003</b>	<b>0.0000</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>3.7000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2888</b>	<b>0.2888</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.2892</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	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0219	0.0187	3.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	2.5533	2.5533	2.7000e-004	0.0000	2.5589
<b>Total</b>	<b>1.6928</b>	<b>0.0219</b>	<b>0.0187</b>	<b>3.0000e-005</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>2.5589</b>

### 3.7 Architectural Coating - 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	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	1.4000e-004	2.6000e-004	2.1400e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2888	0.2888	2.0000e-005	0.0000	0.2892
<b>Total</b>	<b>1.4000e-004</b>	<b>2.6000e-004</b>	<b>2.1400e-003</b>	<b>0.0000</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>3.7000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.2888</b>	<b>0.2888</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.2892</b>

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4026	1.0204	4.5068	8.0000e-003	0.5953	0.0115	0.6068	0.1594	0.0106	0.1700	0.0000	613.5104	613.5104	0.0289	0.0000	614.1163
Unmitigated	0.4026	1.0204	4.5068	8.0000e-003	0.5953	0.0115	0.6068	0.1594	0.0106	0.1700	0.0000	613.5104	613.5104	0.0289	0.0000	614.1163



### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	574.20	604.80	526.20	1,577,435	1,577,435
Total	574.20	604.80	526.20	1,577,435	1,577,435

### 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
Single Family Housing	12.30	5.90	6.40	37.50	15.00	47.50	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.488515	0.036101	0.211699	0.155053	0.049887	0.007463	0.020047	0.014289	0.001917	0.002185	0.008106	0.001606	0.003132

### 5.0 Energy Detail

#### 4.4 Fleet Mix

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Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

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	ROG	NOx	CO	SO2	Fugitive 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	116.0718	116.0718	5.3400e-003	1.1000e-003	116.5261
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	121.7297	121.7297	5.6000e-003	1.1600e-003	122.2061
NaturalGas Mitigated	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0179	74.0179	1.4200e-003	1.3600e-003	74.4683
NaturalGas Unmitigated	9.3400e-003	0.0799	0.0340	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003	0.0000	92.4800	92.4800	1.7700e-003	1.7000e-003	93.0428

**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					
Single Family Housing	1.73301e+006	9.3400e-003	0.0799	0.0340	5.1000e-004		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003	0.0000	92.4800	92.4800	1.7700e-003	1.7000e-003	93.0428
<b>Total</b>		<b>9.3400e-003</b>	<b>0.0799</b>	<b>0.0340</b>	<b>5.1000e-004</b>		<b>6.4600e-003</b>	<b>6.4600e-003</b>		<b>6.4600e-003</b>	<b>6.4600e-003</b>	<b>0.0000</b>	<b>92.4800</b>	<b>92.4800</b>	<b>1.7700e-003</b>	<b>1.7000e-003</b>	<b>93.0428</b>

### 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	tons/yr										MT/yr					
Single Family Housing	1.38704e+006	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0179	74.0179	1.4200e-003	1.3600e-003	74.4683
<b>Total</b>		<b>7.4800e-003</b>	<b>0.0639</b>	<b>0.0272</b>	<b>4.1000e-004</b>		<b>5.1700e-003</b>	<b>5.1700e-003</b>		<b>5.1700e-003</b>	<b>5.1700e-003</b>	<b>0.0000</b>	<b>74.0179</b>	<b>74.0179</b>	<b>1.4200e-003</b>	<b>1.3600e-003</b>	<b>74.4683</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	425380	121.7297	5.6000e-003	1.1600e-003	122.2061
<b>Total</b>		<b>121.7297</b>	<b>5.6000e-003</b>	<b>1.1600e-003</b>	<b>122.2061</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	405609	116.0718	5.3400e-003	1.1000e-003	116.5261
<b>Total</b>		<b>116.0718</b>	<b>5.3400e-003</b>	<b>1.1000e-003</b>	<b>116.5261</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.6048	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431
Unmitigated	0.6048	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431

### 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	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4218					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	0.0140	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431
<b>Total</b>	<b>0.6048</b>	<b>5.2500e-003</b>	<b>0.4500</b>	<b>2.0000e-005</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>	<b>0.0000</b>	<b>0.7277</b>	<b>0.7277</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>0.7431</b>

## 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	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4218					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	0.0140	5.2500e-003	0.4500	2.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	0.7277	0.7277	7.3000e-004	0.0000	0.7431
<b>Total</b>	<b>0.6048</b>	<b>5.2500e-003</b>	<b>0.4500</b>	<b>2.0000e-005</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>		<b>2.4400e-003</b>	<b>2.4400e-003</b>	<b>0.0000</b>	<b>0.7277</b>	<b>0.7277</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>0.7431</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.2669	4.1200e-003	2.4700e-003	9.1191
Unmitigated	9.9048	5.1500e-003	3.0900e-003	10.9705

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.90924 / 2.46452	9.9048	5.1500e-003	3.0900e-003	10.9705
<b>Total</b>		<b>9.9048</b>	<b>5.1500e-003</b>	<b>3.0900e-003</b>	<b>10.9705</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.12739 / 2.31419	8.2669	4.1200e-003	2.4700e-003	9.1191
<b>Total</b>		<b>8.2669</b>	<b>4.1200e-003</b>	<b>2.4700e-003</b>	<b>9.1191</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.7829	0.4009	0.0000	15.2010
Unmitigated	13.5659	0.8017	0.0000	30.4020



## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	66.83	13.5659	0.8017	0.0000	30.4020
<b>Total</b>		<b>13.5659</b>	<b>0.8017</b>	<b>0.0000</b>	<b>30.4020</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	33.415	6.7829	0.4009	0.0000	15.2010
<b>Total</b>		<b>6.7829</b>	<b>0.4009</b>	<b>0.0000</b>	<b>15.2010</b>

## 9.0 Operational Offroad

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

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-60.3400	0.0000	0.0000	-60.3400

## 10.1 Vegetation Land Change

### Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	14 / 0	-60.3400	0.0000	0.0000	-60.3400
<b>Total</b>		<b>-60.3400</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-60.3400</b>