

# Appendix K

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*Alternatives Analysis*



## Heritage Ridge Residential Project - Alt 5a

### South Central Coast Air Basin, Annual

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	179.40	1000sqft	4.12	179,400.00	0
Apartments Mid Rise	213.00	Dwelling Unit	5.61	213,000.00	609
City Park	2.00	Acre	2.00	87,120.00	0
Parking Lot	4.51	Acre	4.51	196,455.60	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.9	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	4			<b>Operational Year</b>	2018
<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 -

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018

### 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	3.3381	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000		2.6407
Energy	0.0308	0.2752	0.1981	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	1,683.576 1	1,683.576 1	0.0692	0.0187		1,690.827 6
Mobile	1.7408	4.4383	18.1359	0.0402	2.9316	0.0531	2.9847	0.7841	0.0489	0.8330	0.0000	3,002.258 1	3,002.258 1	0.1229	0.0000		3,004.838 0
Waste						0.0000	0.0000		0.0000	0.0000	53.7906	0.0000	53.7906	3.1789	0.0000		120.5482
Water						0.0000	0.0000		0.0000	0.0000	14.5186	101.5853	116.1039	1.4959	0.0362		158.7318
<b>Total</b>	<b>5.1098</b>	<b>4.7319</b>	<b>19.9285</b>	<b>0.0420</b>	<b>2.9316</b>	<b>0.0831</b>	<b>3.0147</b>	<b>0.7841</b>	<b>0.0789</b>	<b>0.8630</b>	<b>68.3092</b>	<b>4,790.006 3</b>	<b>4,858.315 4</b>	<b>4.8694</b>	<b>0.0549</b>		<b>4,977.586 2</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	3.3381	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000	2.6407
Energy	0.0308	0.2752	0.1981	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	1,683.576 1	1,683.576 1	0.0692	0.0187	1,690.827 6
Mobile	1.7408	4.4383	18.1359	0.0402	2.9316	0.0531	2.9847	0.7841	0.0489	0.8330	0.0000	3,002.258 1	3,002.258 1	0.1229	0.0000	3,004.838 0
Waste						0.0000	0.0000		0.0000	0.0000	53.7906	0.0000	53.7906	3.1789	0.0000	120.5482
Water						0.0000	0.0000		0.0000	0.0000	14.5186	101.5853	116.1039	1.4956	0.0361	158.7086
<b>Total</b>	<b>5.1098</b>	<b>4.7319</b>	<b>19.9285</b>	<b>0.0420</b>	<b>2.9316</b>	<b>0.0831</b>	<b>3.0147</b>	<b>0.7841</b>	<b>0.0789</b>	<b>0.8630</b>	<b>68.3092</b>	<b>4,790.006 3</b>	<b>4,858.315 4</b>	<b>4.8692</b>	<b>0.0548</b>	<b>4,977.563 1</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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
3	Grading	Grading	2/11/2017	3/24/2017	5	30	
4	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
5	Paving	Paving	5/19/2018	6/15/2018	5	20	
6	Architectural Coating	Architectural Coating	6/16/2018	7/13/2018	5	20	

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

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 0**

**Residential Indoor: 431,325; Residential Outdoor: 143,775; Non-Residential Indoor: 408,621; Non-Residential Outdoor: 136,207 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
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
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	330.00	99.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	66.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 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	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8292
<b>Total</b>	<b>0.0405</b>	<b>0.4270</b>	<b>0.3389</b>	<b>4.0000e-004</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0198</b>	<b>0.0198</b>	<b>0.0000</b>	<b>36.6182</b>	<b>36.6182</b>	<b>0.0101</b>	<b>0.0000</b>	<b>36.8292</b>



### 3.2 Demolition - 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	0.0000	0.0000	0.0000	0.0000	0.0000	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	5.1000e-004	7.0000e-004	6.4000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9970	0.9970	5.0000e-005	0.0000	0.9981	
<b>Total</b>	<b>5.1000e-004</b>	<b>7.0000e-004</b>	<b>6.4000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9970</b>	<b>0.9970</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9981</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	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8291
<b>Total</b>	<b>0.0405</b>	<b>0.4270</b>	<b>0.3389</b>	<b>4.0000e-004</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0198</b>	<b>0.0198</b>	<b>0.0000</b>	<b>36.6182</b>	<b>36.6182</b>	<b>0.0101</b>	<b>0.0000</b>	<b>36.8291</b>

### 3.2 Demolition - 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	5.1000e-004	7.0000e-004	6.4000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9970	0.9970	5.0000e-005	0.0000	0.9981
<b>Total</b>	<b>5.1000e-004</b>	<b>7.0000e-004</b>	<b>6.4000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9970</b>	<b>0.9970</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9981</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>	<b>0.0242</b>	<b>0.2588</b>	<b>0.1970</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0138</b>	<b>0.1041</b>	<b>0.0497</b>	<b>0.0127</b>	<b>0.0623</b>	<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.0000e-004	4.2000e-004	3.8400e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.5982	0.5982	3.0000e-005	0.0000	0.5989
<b>Total</b>	<b>3.0000e-004</b>	<b>4.2000e-004</b>	<b>3.8400e-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>1.0000e-005</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5982</b>	<b>0.5982</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5989</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	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>	<b>0.0242</b>	<b>0.2588</b>	<b>0.1970</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0138</b>	<b>0.1041</b>	<b>0.0497</b>	<b>0.0127</b>	<b>0.0623</b>	<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

### 3.3 Site Preparation - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.0000e-004	4.2000e-004	3.8400e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.5982	0.5982	3.0000e-005	0.0000	0.5989
<b>Total</b>	<b>3.0000e-004</b>	<b>4.2000e-004</b>	<b>3.8400e-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>1.0000e-005</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5982</b>	<b>0.5982</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5989</b>

### 3.4 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0915	1.0439	0.7021	9.3000e-004		0.0498	0.0498		0.0458	0.0458	0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>	<b>0.0915</b>	<b>1.0439</b>	<b>0.7021</b>	<b>9.3000e-004</b>	<b>0.1301</b>	<b>0.0498</b>	<b>0.1799</b>	<b>0.0540</b>	<b>0.0458</b>	<b>0.0997</b>	<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

### 3.4 Grading - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0100e-003	1.4000e-003	0.0128	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	1.9940	1.9940	1.1000e-004	0.0000	1.9963
<b>Total</b>	<b>1.0100e-003</b>	<b>1.4000e-003</b>	<b>0.0128</b>	<b>3.0000e-005</b>	<b>2.4100e-003</b>	<b>2.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.9940</b>	<b>1.9940</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.9963</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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0915	1.0439	0.7021	9.3000e-004		0.0498	0.0498		0.0458	0.0458	0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>	<b>0.0915</b>	<b>1.0439</b>	<b>0.7021</b>	<b>9.3000e-004</b>	<b>0.1301</b>	<b>0.0498</b>	<b>0.1799</b>	<b>0.0540</b>	<b>0.0458</b>	<b>0.0997</b>	<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>

### 3.4 Grading - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0100e-003	1.4000e-003	0.0128	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	1.9940	1.9940	1.1000e-004	0.0000	1.9963
<b>Total</b>	<b>1.0100e-003</b>	<b>1.4000e-003</b>	<b>0.0128</b>	<b>3.0000e-005</b>	<b>2.4100e-003</b>	<b>2.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.9940</b>	<b>1.9940</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.9963</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	0.3102	2.6406	1.8129	2.6800e-003		0.1781	0.1781		0.1673	0.1673	0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>	<b>0.3102</b>	<b>2.6406</b>	<b>1.8129</b>	<b>2.6800e-003</b>		<b>0.1781</b>	<b>0.1781</b>		<b>0.1673</b>	<b>0.1673</b>	<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</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	0.0998	0.9279	1.3171	2.2800e-003	0.0641	0.0135	0.0776	0.0183	0.0124	0.0307	0.0000	203.4361	203.4361	1.4400e-003	0.0000	0.0000	203.4663
Worker	0.1113	0.1539	1.4074	3.0100e-003	0.2651	2.0200e-003	0.2671	0.0704	1.8600e-003	0.0723	0.0000	219.3408	219.3408	0.0117	0.0000	0.0000	219.5873
<b>Total</b>	<b>0.2111</b>	<b>1.0818</b>	<b>2.7246</b>	<b>5.2900e-003</b>	<b>0.3292</b>	<b>0.0155</b>	<b>0.3447</b>	<b>0.0887</b>	<b>0.0143</b>	<b>0.1030</b>	<b>0.0000</b>	<b>422.7769</b>	<b>422.7769</b>	<b>0.0132</b>	<b>0.0000</b>	<b>0.0000</b>	<b>423.0536</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	0.3102	2.6406	1.8129	2.6800e-003		0.1781	0.1781		0.1673	0.1673	0.0000	239.4788	239.4788	0.0589	0.0000	0.0000	240.7166
<b>Total</b>	<b>0.3102</b>	<b>2.6406</b>	<b>1.8129</b>	<b>2.6800e-003</b>		<b>0.1781</b>	<b>0.1781</b>		<b>0.1673</b>	<b>0.1673</b>	<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>0.0000</b>	<b>240.7166</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	0.0998	0.9279	1.3171	2.2800e-003	0.0641	0.0135	0.0776	0.0183	0.0124	0.0307	0.0000	203.4361	203.4361	1.4400e-003	0.0000	203.4663
Worker	0.1113	0.1539	1.4074	3.0100e-003	0.2651	2.0200e-003	0.2671	0.0704	1.8600e-003	0.0723	0.0000	219.3408	219.3408	0.0117	0.0000	219.5873
<b>Total</b>	<b>0.2111</b>	<b>1.0818</b>	<b>2.7246</b>	<b>5.2900e-003</b>	<b>0.3292</b>	<b>0.0155</b>	<b>0.3447</b>	<b>0.0887</b>	<b>0.0143</b>	<b>0.1030</b>	<b>0.0000</b>	<b>422.7769</b>	<b>422.7769</b>	<b>0.0132</b>	<b>0.0000</b>	<b>423.0536</b>

### 3.5 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	0.1334	1.1630	0.8766	1.3400e-003		0.0747	0.0747		0.0702	0.0702	0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>	<b>0.1334</b>	<b>1.1630</b>	<b>0.8766</b>	<b>1.3400e-003</b>		<b>0.0747</b>	<b>0.0747</b>		<b>0.0702</b>	<b>0.0702</b>	<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>



### 3.5 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	0.0457	0.4214	0.6230	1.1400e-003	0.0320	6.2400e-003	0.0383	9.1400e-003	5.7400e-003	0.0149	0.0000	100.0098	100.0098	7.1000e-004	0.0000	100.0246
Worker	0.0495	0.0689	0.6262	1.5100e-003	0.1326	9.8000e-004	0.1335	0.0352	9.0000e-004	0.0361	0.0000	105.5559	105.5559	5.3700e-003	0.0000	105.6687
<b>Total</b>	<b>0.0952</b>	<b>0.4903</b>	<b>1.2492</b>	<b>2.6500e-003</b>	<b>0.1646</b>	<b>7.2200e-003</b>	<b>0.1718</b>	<b>0.0444</b>	<b>6.6400e-003</b>	<b>0.0510</b>	<b>0.0000</b>	<b>205.5658</b>	<b>205.5658</b>	<b>6.0800e-003</b>	<b>0.0000</b>	<b>205.6933</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	0.1334	1.1630	0.8766	1.3400e-003		0.0747	0.0747		0.0702	0.0702	0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>	<b>0.1334</b>	<b>1.1630</b>	<b>0.8766</b>	<b>1.3400e-003</b>		<b>0.0747</b>	<b>0.0747</b>		<b>0.0702</b>	<b>0.0702</b>	<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**3.5 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	0.0457	0.4214	0.6230	1.1400e-003	0.0320	6.2400e-003	0.0383	9.1400e-003	5.7400e-003	0.0149	0.0000	100.0098	100.0098	7.1000e-004	0.0000	100.0246
Worker	0.0495	0.0689	0.6262	1.5100e-003	0.1326	9.8000e-004	0.1335	0.0352	9.0000e-004	0.0361	0.0000	105.5559	105.5559	5.3700e-003	0.0000	105.6687
<b>Total</b>	<b>0.0952</b>	<b>0.4903</b>	<b>1.2492</b>	<b>2.6500e-003</b>	<b>0.1646</b>	<b>7.2200e-003</b>	<b>0.1718</b>	<b>0.0444</b>	<b>6.6400e-003</b>	<b>0.0510</b>	<b>0.0000</b>	<b>205.5658</b>	<b>205.5658</b>	<b>6.0800e-003</b>	<b>0.0000</b>	<b>205.6933</b>

**3.6 Paving - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	5.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0220</b>	<b>0.1716</b>	<b>0.1449</b>	<b>2.2000e-004</b>		<b>9.3900e-003</b>	<b>9.3900e-003</b>		<b>8.6400e-003</b>	<b>8.6400e-003</b>	<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

### 3.6 Paving - 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	4.5000e-004	6.3000e-004	5.6900e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9596	0.9596	5.0000e-005	0.0000	0.9606
<b>Total</b>	<b>4.5000e-004</b>	<b>6.3000e-004</b>	<b>5.6900e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9596</b>	<b>0.9596</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9606</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	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	5.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0220</b>	<b>0.1716</b>	<b>0.1449</b>	<b>2.2000e-004</b>		<b>9.3900e-003</b>	<b>9.3900e-003</b>		<b>8.6400e-003</b>	<b>8.6400e-003</b>	<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

### 3.6 Paving - 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	4.5000e-004	6.3000e-004	5.6900e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9596	0.9596	5.0000e-005	0.0000	0.9606
<b>Total</b>	<b>4.5000e-004</b>	<b>6.3000e-004</b>	<b>5.6900e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9596</b>	<b>0.9596</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9606</b>

### 3.7 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.4886					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>	<b>6.4916</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

### 3.7 Architectural Coating - 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	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	0.0000
Worker	1.9800e-003	2.7600e-003	0.0251	6.0000e-005	5.3000e-003	4.0000e-005	5.3400e-003	1.4100e-003	4.0000e-005	1.4400e-003	0.0000	4.2222	4.2222	2.1000e-004	0.0000	4.2268	
<b>Total</b>	<b>1.9800e-003</b>	<b>2.7600e-003</b>	<b>0.0251</b>	<b>6.0000e-005</b>	<b>5.3000e-003</b>	<b>4.0000e-005</b>	<b>5.3400e-003</b>	<b>1.4100e-003</b>	<b>4.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>4.2222</b>	<b>4.2222</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>4.2268</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	6.4886					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>	<b>6.4916</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

### 3.7 Architectural Coating - 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	1.9800e-003	2.7600e-003	0.0251	6.0000e-005	5.3000e-003	4.0000e-005	5.3400e-003	1.4100e-003	4.0000e-005	1.4400e-003	0.0000	4.2222	4.2222	2.1000e-004	0.0000	4.2268
<b>Total</b>	<b>1.9800e-003</b>	<b>2.7600e-003</b>	<b>0.0251</b>	<b>6.0000e-005</b>	<b>5.3000e-003</b>	<b>4.0000e-005</b>	<b>5.3400e-003</b>	<b>1.4100e-003</b>	<b>4.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>4.2222</b>	<b>4.2222</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>4.2268</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	1.7408	4.4383	18.1359	0.0402	2.9316	0.0531	2.9847	0.7841	0.0489	0.8330	0.0000	3,002.2581	3,002.2581	0.1229	0.0000	3,004.8380
Unmitigated	1.7408	4.4383	18.1359	0.0402	2.9316	0.0531	2.9847	0.7841	0.0489	0.8330	0.0000	3,002.2581	3,002.2581	0.1229	0.0000	3,004.8380

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,403.67	1,525.08	1292.91	3,954,279	3,954,279
City Park	3.18	3.18	3.18	6,789	6,789
Office Park	2,048.75	294.22	136.34	3,821,777	3,821,777
Parking Lot	0.00	0.00	0.00		
<b>Total</b>	<b>3,455.60</b>	<b>1,822.48</b>	<b>1,432.43</b>	<b>7,782,844</b>	<b>7,782,844</b>

### 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
Apartments Mid Rise	10.80	7.30	7.50	37.50	15.00	47.50	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.475816	0.050475	0.196961	0.155587	0.062959	0.009294	0.016437	0.017519	0.001428	0.001295	0.007007	0.000827	0.004394

### 5.0 Energy Detail

#### 5.1 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,378.4711	1,378.4711	0.0634	0.0131	1,383.8658
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,378.4711	1,378.4711	0.0634	0.0131	1,383.8658
NaturalGas Mitigated	0.0308	0.2752	0.1981	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	305.1050	305.1050	5.8500e-003	5.5900e-003	306.9618
NaturalGas Unmitigated	0.0308	0.2752	0.1981	1.6800e-003		0.0213	0.0213		0.0213	0.0213	0.0000	305.1050	305.1050	5.8500e-003	5.5900e-003	306.9618

**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					
Apartments Mid Rise	1.73118e+006	9.3300e-003	0.0798	0.0339	5.1000e-004		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	92.3825	92.3825	1.7700e-003	1.6900e-003	92.9448
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Office Park	3.98627e+006	0.0215	0.1954	0.1641	1.1700e-003		0.0149	0.0149		0.0149	0.0149	0.0000	212.7224	212.7224	4.0800e-003	3.9000e-003	214.0170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0308</b>	<b>0.2752</b>	<b>0.1981</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>	<b>0.0000</b>	<b>305.1050</b>	<b>305.1050</b>	<b>5.8500e-003</b>	<b>5.5900e-003</b>	<b>306.9618</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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Office Park	3.98627e+006	0.0215	0.1954	0.1641	1.1700e-003		0.0149	0.0149		0.0149	0.0149	0.0000	212.7224	212.7224	4.0800e-003	3.9000e-003	214.0170
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.73118e+006	9.3300e-003	0.0798	0.0339	5.1000e-004		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	92.3825	92.3825	1.7700e-003	1.6900e-003	92.9448
<b>Total</b>		<b>0.0308</b>	<b>0.2752</b>	<b>0.1981</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>	<b>0.0000</b>	<b>305.1050</b>	<b>305.1050</b>	<b>5.8500e-003</b>	<b>5.5900e-003</b>	<b>306.9618</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	751157	214.9563	9.8800e-003	2.0400e-003	215.7976
City Park	0	0.0000	0.0000	0.0000	0.0000
Office Park	3.89298e+006	1,114.0420	0.0512	0.0106	1,118.4018
Parking Lot	172881	49.4728	2.2700e-003	4.7000e-004	49.6664
<b>Total</b>		<b>1,378.4711</b>	<b>0.0634</b>	<b>0.0131</b>	<b>1,383.8658</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	751157	214.9563	9.8800e-003	2.0400e-003	215.7976
City Park	0	0.0000	0.0000	0.0000	0.0000
Office Park	3.89298e+006	1,114.0420	0.0512	0.0106	1,118.4018
Parking Lot	172881	49.4728	2.2700e-003	4.7000e-004	49.6664
<b>Total</b>		<b>1,378.4711</b>	<b>0.0634</b>	<b>0.0131</b>	<b>1,383.8658</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3381	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000	2.6407
Unmitigated	3.3381	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000	2.6407

## 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	0.6489					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6400					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	0.0493	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000	2.6407
<b>Total</b>	<b>3.3381</b>	<b>0.0185</b>	<b>1.5945</b>	<b>8.0000e-005</b>		<b>8.7000e-003</b>	<b>8.7000e-003</b>		<b>8.7000e-003</b>	<b>8.7000e-003</b>	<b>0.0000</b>	<b>2.5868</b>	<b>2.5868</b>	<b>2.5700e-003</b>	<b>0.0000</b>	<b>2.6407</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	0.6489					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6400					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	0.0493	0.0185	1.5945	8.0000e-005		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	2.5868	2.5868	2.5700e-003	0.0000	2.6407
<b>Total</b>	<b>3.3381</b>	<b>0.0185</b>	<b>1.5945</b>	<b>8.0000e-005</b>		<b>8.7000e-003</b>	<b>8.7000e-003</b>		<b>8.7000e-003</b>	<b>8.7000e-003</b>	<b>0.0000</b>	<b>2.5868</b>	<b>2.5868</b>	<b>2.5700e-003</b>	<b>0.0000</b>	<b>2.6407</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	116.1039	1.4956	0.0361	158.7086
Unmitigated	116.1039	1.4959	0.0362	158.7318

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.8778 / 8.74905	34.6548	0.4536	0.0110	47.5796
City Park	0 / 2.38296	2.3867	1.1000e-004	2.0000e-005	2.3961
Office Park	31.8854 / 19.5427	79.0624	1.0422	0.0252	108.7561
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>116.1039</b>	<b>1.4959</b>	<b>0.0362</b>	<b>158.7318</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.8778 / 8.74905	34.6548	0.4535	0.0110	47.5726
City Park	0 / 2.38296	2.3867	1.1000e-004	2.0000e-005	2.3961
Office Park	31.8854 / 19.5427	79.0624	1.0420	0.0252	108.7400
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>116.1039</b>	<b>1.4956</b>	<b>0.0361</b>	<b>158.7086</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	53.7906	3.1789	0.0000	120.5482
Unmitigated	53.7906	3.1789	0.0000	120.5482

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	97.98	19.8891	1.1754	0.0000	44.5727
City Park	0.17	0.0345	2.0400e-003	0.0000	0.0773
Office Park	166.84	33.8670	2.0015	0.0000	75.8982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>53.7906</b>	<b>3.1789</b>	<b>0.0000</b>	<b>120.5482</b>



## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	97.98	19.8891	1.1754	0.0000	44.5727
City Park	0.17	0.0345	2.0400e-003	0.0000	0.0773
Office Park	166.84	33.8670	2.0015	0.0000	75.8982
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>53.7906</b>	<b>3.1789</b>	<b>0.0000</b>	<b>120.5482</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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## Heritage Ridge Residential Project - Alt 5b

### South Central Coast Air Basin, Annual

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	171.00	Dwelling Unit	4.50	171,000.00	489
Office Park	89.70	1000sqft	2.06	89,700.00	0
City Park	2.00	Acre	2.00	87,120.00	0
Parking Lot	4.51	Acre	4.51	196,455.60	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.9	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	4			<b>Operational Year</b>	2018
<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 -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018

### 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	2.6444	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190
Energy	0.0182	0.1617	0.1093	9.9000e-004		0.0126	0.0126		0.0126	0.0126	0.0000	959.5918	959.5918	0.0393	0.0107	963.7394
Mobile	1.1287	2.8977	11.8170	0.0263	1.9181	0.0347	1.9528	0.5130	0.0320	0.5450	0.0000	1,963.5149	1,963.5149	0.0803	0.0000	1,965.2002
Waste						0.0000	0.0000		0.0000	0.0000	32.9353	0.0000	32.9353	1.9464	0.0000	73.8101
Water						0.0000	0.0000		0.0000	0.0000	8.5925	61.1469	69.7394	0.8854	0.0214	94.9718
<b>Total</b>	<b>3.7913</b>	<b>3.0743</b>	<b>13.2059</b>	<b>0.0274</b>	<b>1.9181</b>	<b>0.0543</b>	<b>1.9724</b>	<b>0.5130</b>	<b>0.0516</b>	<b>0.5646</b>	<b>41.5278</b>	<b>2,986.3293</b>	<b>3,027.8571</b>	<b>2.9534</b>	<b>0.0321</b>	<b>3,099.8406</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	2.6444	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190
Energy	0.0182	0.1617	0.1093	9.9000e-004		0.0126	0.0126		0.0126	0.0126	0.0000	959.5918	959.5918	0.0393	0.0107	963.7394
Mobile	1.1287	2.8977	11.8170	0.0263	1.9181	0.0347	1.9528	0.5130	0.0320	0.5450	0.0000	1,963.5149	1,963.5149	0.0803	0.0000	1,965.2002
Waste						0.0000	0.0000		0.0000	0.0000	32.9353	0.0000	32.9353	1.9464	0.0000	73.8101
Water						0.0000	0.0000		0.0000	0.0000	8.5925	61.1469	69.7394	0.8852	0.0214	94.9581
<b>Total</b>	<b>3.7913</b>	<b>3.0743</b>	<b>13.2059</b>	<b>0.0274</b>	<b>1.9181</b>	<b>0.0543</b>	<b>1.9724</b>	<b>0.5130</b>	<b>0.0516</b>	<b>0.5646</b>	<b>41.5278</b>	<b>2,986.3293</b>	<b>3,027.8571</b>	<b>2.9532</b>	<b>0.0321</b>	<b>3,099.8269</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>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</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	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
3	Grading	Grading	2/11/2017	3/24/2017	5	30	
4	Building Construction	Building Construction	3/25/2017	5/18/2018	5	300	
5	Paving	Paving	5/19/2018	6/15/2018	5	20	
6	Architectural Coating	Architectural Coating	6/16/2018	7/13/2018	5	20	

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

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 0**

**Residential Indoor: 346,275; Residential Outdoor: 115,425; Non-Residential Indoor: 274,071; Non-Residential Outdoor: 91,357 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
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
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	271.00	79.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 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	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8292
<b>Total</b>	<b>0.0405</b>	<b>0.4270</b>	<b>0.3389</b>	<b>4.0000e-004</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0198</b>	<b>0.0198</b>	<b>0.0000</b>	<b>36.6182</b>	<b>36.6182</b>	<b>0.0101</b>	<b>0.0000</b>	<b>36.8292</b>



### 3.2 Demolition - 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	5.1000e-004	7.0000e-004	6.4000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9970	0.9970	5.0000e-005	0.0000	0.9981
<b>Total</b>	<b>5.1000e-004</b>	<b>7.0000e-004</b>	<b>6.4000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9970</b>	<b>0.9970</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9981</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	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8291
<b>Total</b>	<b>0.0405</b>	<b>0.4270</b>	<b>0.3389</b>	<b>4.0000e-004</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0198</b>	<b>0.0198</b>	<b>0.0000</b>	<b>36.6182</b>	<b>36.6182</b>	<b>0.0101</b>	<b>0.0000</b>	<b>36.8291</b>

### 3.2 Demolition - 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	5.1000e-004	7.0000e-004	6.4000e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9970	0.9970	5.0000e-005	0.0000	0.9981
<b>Total</b>	<b>5.1000e-004</b>	<b>7.0000e-004</b>	<b>6.4000e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9970</b>	<b>0.9970</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9981</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>	<b>0.0242</b>	<b>0.2588</b>	<b>0.1970</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0138</b>	<b>0.1041</b>	<b>0.0497</b>	<b>0.0127</b>	<b>0.0623</b>	<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.0000e-004	4.2000e-004	3.8400e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.5982	0.5982	3.0000e-005	0.0000	0.5989
<b>Total</b>	<b>3.0000e-004</b>	<b>4.2000e-004</b>	<b>3.8400e-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>1.0000e-005</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5982</b>	<b>0.5982</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5989</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	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
<b>Total</b>	<b>0.0242</b>	<b>0.2588</b>	<b>0.1970</b>	<b>2.0000e-004</b>	<b>0.0903</b>	<b>0.0138</b>	<b>0.1041</b>	<b>0.0497</b>	<b>0.0127</b>	<b>0.0623</b>	<b>0.0000</b>	<b>18.1577</b>	<b>18.1577</b>	<b>5.5600e-003</b>	<b>0.0000</b>	<b>18.2745</b>

### 3.3 Site Preparation - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.0000e-004	4.2000e-004	3.8400e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.5982	0.5982	3.0000e-005	0.0000	0.5989
<b>Total</b>	<b>3.0000e-004</b>	<b>4.2000e-004</b>	<b>3.8400e-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>1.0000e-005</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5982</b>	<b>0.5982</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5989</b>

### 3.4 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0915	1.0439	0.7021	9.3000e-004		0.0498	0.0498		0.0458	0.0458	0.0000	85.9109	85.9109	0.0263	0.0000	86.4637
<b>Total</b>	<b>0.0915</b>	<b>1.0439</b>	<b>0.7021</b>	<b>9.3000e-004</b>	<b>0.1301</b>	<b>0.0498</b>	<b>0.1799</b>	<b>0.0540</b>	<b>0.0458</b>	<b>0.0997</b>	<b>0.0000</b>	<b>85.9109</b>	<b>85.9109</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4637</b>

### 3.4 Grading - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0100e-003	1.4000e-003	0.0128	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	1.9940	1.9940	1.1000e-004	0.0000	1.9963
<b>Total</b>	<b>1.0100e-003</b>	<b>1.4000e-003</b>	<b>0.0128</b>	<b>3.0000e-005</b>	<b>2.4100e-003</b>	<b>2.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.9940</b>	<b>1.9940</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.9963</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					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0915	1.0439	0.7021	9.3000e-004		0.0498	0.0498		0.0458	0.0458	0.0000	85.9108	85.9108	0.0263	0.0000	86.4636
<b>Total</b>	<b>0.0915</b>	<b>1.0439</b>	<b>0.7021</b>	<b>9.3000e-004</b>	<b>0.1301</b>	<b>0.0498</b>	<b>0.1799</b>	<b>0.0540</b>	<b>0.0458</b>	<b>0.0997</b>	<b>0.0000</b>	<b>85.9108</b>	<b>85.9108</b>	<b>0.0263</b>	<b>0.0000</b>	<b>86.4636</b>

### 3.4 Grading - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	1.0100e-003	1.4000e-003	0.0128	3.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	1.9940	1.9940	1.1000e-004	0.0000	1.9963
<b>Total</b>	<b>1.0100e-003</b>	<b>1.4000e-003</b>	<b>0.0128</b>	<b>3.0000e-005</b>	<b>2.4100e-003</b>	<b>2.0000e-005</b>	<b>2.4300e-003</b>	<b>6.4000e-004</b>	<b>2.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>1.9940</b>	<b>1.9940</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.9963</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	0.3102	2.6406	1.8129	2.6800e-003		0.1781	0.1781		0.1673	0.1673	0.0000	239.4791	239.4791	0.0589	0.0000	240.7169
<b>Total</b>	<b>0.3102</b>	<b>2.6406</b>	<b>1.8129</b>	<b>2.6800e-003</b>		<b>0.1781</b>	<b>0.1781</b>		<b>0.1673</b>	<b>0.1673</b>	<b>0.0000</b>	<b>239.4791</b>	<b>239.4791</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7169</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
Vendor	0.0796	0.7404	1.0510	1.8200e-003	0.0511	0.0108	0.0619	0.0146	9.8900e-003	0.0245	0.0000	162.3379	162.3379	1.1500e-003	0.0000	162.3620
Worker	0.0914	0.1264	1.1558	2.4700e-003	0.2177	1.6600e-003	0.2194	0.0579	1.5300e-003	0.0594	0.0000	180.1253	180.1253	9.6400e-003	0.0000	180.3277
<b>Total</b>	<b>0.1710</b>	<b>0.8668</b>	<b>2.2068</b>	<b>4.2900e-003</b>	<b>0.2689</b>	<b>0.0124</b>	<b>0.2813</b>	<b>0.0724</b>	<b>0.0114</b>	<b>0.0838</b>	<b>0.0000</b>	<b>342.4632</b>	<b>342.4632</b>	<b>0.0108</b>	<b>0.0000</b>	<b>342.6898</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	0.3102	2.6406	1.8129	2.6800e-003		0.1781	0.1781		0.1673	0.1673	0.0000	239.4788	239.4788	0.0589	0.0000	240.7166
<b>Total</b>	<b>0.3102</b>	<b>2.6406</b>	<b>1.8129</b>	<b>2.6800e-003</b>		<b>0.1781</b>	<b>0.1781</b>		<b>0.1673</b>	<b>0.1673</b>	<b>0.0000</b>	<b>239.4788</b>	<b>239.4788</b>	<b>0.0589</b>	<b>0.0000</b>	<b>240.7166</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	0.0796	0.7404	1.0510	1.8200e-003	0.0511	0.0108	0.0619	0.0146	9.8900e-003	0.0245	0.0000	162.3379	162.3379	1.1500e-003	0.0000	162.3620
Worker	0.0914	0.1264	1.1558	2.4700e-003	0.2177	1.6600e-003	0.2194	0.0579	1.5300e-003	0.0594	0.0000	180.1253	180.1253	9.6400e-003	0.0000	180.3277
<b>Total</b>	<b>0.1710</b>	<b>0.8668</b>	<b>2.2068</b>	<b>4.2900e-003</b>	<b>0.2689</b>	<b>0.0124</b>	<b>0.2813</b>	<b>0.0724</b>	<b>0.0114</b>	<b>0.0838</b>	<b>0.0000</b>	<b>342.4632</b>	<b>342.4632</b>	<b>0.0108</b>	<b>0.0000</b>	<b>342.6898</b>

### 3.5 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	0.1334	1.1630	0.8766	1.3400e-003		0.0747	0.0747		0.0702	0.0702	0.0000	118.3848	118.3848	0.0290	0.0000	118.9932
<b>Total</b>	<b>0.1334</b>	<b>1.1630</b>	<b>0.8766</b>	<b>1.3400e-003</b>		<b>0.0747</b>	<b>0.0747</b>		<b>0.0702</b>	<b>0.0702</b>	<b>0.0000</b>	<b>118.3848</b>	<b>118.3848</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9932</b>



### 3.5 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	0.0365	0.3363	0.4972	9.1000e-004	0.0256	4.9800e-003	0.0306	7.2900e-003	4.5800e-003	0.0119	0.0000	79.8058	79.8058	5.6000e-004	0.0000	79.8176
Worker	0.0406	0.0566	0.5142	1.2400e-003	0.1089	8.0000e-004	0.1097	0.0289	7.4000e-004	0.0297	0.0000	86.6838	86.6838	4.4100e-003	0.0000	86.7764
<b>Total</b>	<b>0.0771</b>	<b>0.3929</b>	<b>1.0114</b>	<b>2.1500e-003</b>	<b>0.1344</b>	<b>5.7800e-003</b>	<b>0.1402</b>	<b>0.0362</b>	<b>5.3200e-003</b>	<b>0.0415</b>	<b>0.0000</b>	<b>166.4896</b>	<b>166.4896</b>	<b>4.9700e-003</b>	<b>0.0000</b>	<b>166.5940</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	0.1334	1.1630	0.8766	1.3400e-003		0.0747	0.0747		0.0702	0.0702	0.0000	118.3847	118.3847	0.0290	0.0000	118.9931
<b>Total</b>	<b>0.1334</b>	<b>1.1630</b>	<b>0.8766</b>	<b>1.3400e-003</b>		<b>0.0747</b>	<b>0.0747</b>		<b>0.0702</b>	<b>0.0702</b>	<b>0.0000</b>	<b>118.3847</b>	<b>118.3847</b>	<b>0.0290</b>	<b>0.0000</b>	<b>118.9931</b>

**3.5 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	0.0365	0.3363	0.4972	9.1000e-004	0.0256	4.9800e-003	0.0306	7.2900e-003	4.5800e-003	0.0119	0.0000	79.8058	79.8058	5.6000e-004	0.0000	79.8176
Worker	0.0406	0.0566	0.5142	1.2400e-003	0.1089	8.0000e-004	0.1097	0.0289	7.4000e-004	0.0297	0.0000	86.6838	86.6838	4.4100e-003	0.0000	86.7764
<b>Total</b>	<b>0.0771</b>	<b>0.3929</b>	<b>1.0114</b>	<b>2.1500e-003</b>	<b>0.1344</b>	<b>5.7800e-003</b>	<b>0.1402</b>	<b>0.0362</b>	<b>5.3200e-003</b>	<b>0.0415</b>	<b>0.0000</b>	<b>166.4896</b>	<b>166.4896</b>	<b>4.9700e-003</b>	<b>0.0000</b>	<b>166.5940</b>

**3.6 Paving - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	5.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0220</b>	<b>0.1716</b>	<b>0.1449</b>	<b>2.2000e-004</b>		<b>9.3900e-003</b>	<b>9.3900e-003</b>		<b>8.6400e-003</b>	<b>8.6400e-003</b>	<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

### 3.6 Paving - 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	4.5000e-004	6.3000e-004	5.6900e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9596	0.9596	5.0000e-005	0.0000	0.9606
<b>Total</b>	<b>4.5000e-004</b>	<b>6.3000e-004</b>	<b>5.6900e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9596</b>	<b>0.9596</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9606</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	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	5.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0220</b>	<b>0.1716</b>	<b>0.1449</b>	<b>2.2000e-004</b>		<b>9.3900e-003</b>	<b>9.3900e-003</b>		<b>8.6400e-003</b>	<b>8.6400e-003</b>	<b>0.0000</b>	<b>20.3687</b>	<b>20.3687</b>	<b>6.3400e-003</b>	<b>0.0000</b>	<b>20.5019</b>

### 3.6 Paving - 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	4.5000e-004	6.3000e-004	5.6900e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9596	0.9596	5.0000e-005	0.0000	0.9606
<b>Total</b>	<b>4.5000e-004</b>	<b>6.3000e-004</b>	<b>5.6900e-003</b>	<b>1.0000e-005</b>	<b>1.2100e-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>0.9596</b>	<b>0.9596</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.9606</b>

### 3.7 Architectural Coating - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.7922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>	<b>4.7952</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

### 3.7 Architectural Coating - 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	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	0.0000
Worker	1.6200e-003	2.2600e-003	0.0205	5.0000e-005	4.3400e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.4546	3.4546	1.8000e-004	0.0000	3.4583	
<b>Total</b>	<b>1.6200e-003</b>	<b>2.2600e-003</b>	<b>0.0205</b>	<b>5.0000e-005</b>	<b>4.3400e-003</b>	<b>3.0000e-005</b>	<b>4.3700e-003</b>	<b>1.1500e-003</b>	<b>3.0000e-005</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>3.4546</b>	<b>3.4546</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.4583</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	4.7922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0201	0.0185	3.0000e-005		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	2.5533	2.5533	2.4000e-004	0.0000	2.5584
<b>Total</b>	<b>4.7952</b>	<b>0.0201</b>	<b>0.0185</b>	<b>3.0000e-005</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>		<b>1.5100e-003</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.5584</b>

### 3.7 Architectural Coating - 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	1.6200e-003	2.2600e-003	0.0205	5.0000e-005	4.3400e-003	3.0000e-005	4.3700e-003	1.1500e-003	3.0000e-005	1.1800e-003	0.0000	3.4546	3.4546	1.8000e-004	0.0000	3.4583
<b>Total</b>	<b>1.6200e-003</b>	<b>2.2600e-003</b>	<b>0.0205</b>	<b>5.0000e-005</b>	<b>4.3400e-003</b>	<b>3.0000e-005</b>	<b>4.3700e-003</b>	<b>1.1500e-003</b>	<b>3.0000e-005</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>3.4546</b>	<b>3.4546</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.4583</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	1.1287	2.8977	11.8170	0.0263	1.9181	0.0347	1.9528	0.5130	0.0320	0.5450	0.0000	1,963.5149	1,963.5149	0.0803	0.0000	1,965.2002
Unmitigated	1.1287	2.8977	11.8170	0.0263	1.9181	0.0347	1.9528	0.5130	0.0320	0.5450	0.0000	1,963.5149	1,963.5149	0.0803	0.0000	1,965.2002

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,126.89	1,224.36	1037.97	3,174,562	3,174,562
City Park	3.18	3.18	3.18	6,789	6,789
Office Park	1,024.37	147.11	68.17	1,910,888	1,910,888
Parking Lot	0.00	0.00	0.00		
<b>Total</b>	<b>2,154.44</b>	<b>1,374.65</b>	<b>1,109.32</b>	<b>5,092,239</b>	<b>5,092,239</b>

### 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
Apartments Mid Rise	10.80	7.30	7.50	37.50	15.00	47.50	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.475816	0.050475	0.196961	0.155587	0.062959	0.009294	0.016437	0.017519	0.001428	0.001295	0.007007	0.000827	0.004394

### 5.0 Energy Detail

#### 5.1 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	779.0644	779.0644	0.0358	7.4100e-003	782.1133
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	779.0644	779.0644	0.0358	7.4100e-003	782.1133
NaturalGas Mitigated	0.0182	0.1617	0.1093	9.9000e-004		0.0126	0.0126		0.0126	0.0126	0.0000	180.5275	180.5275	3.4600e-003	3.3100e-003	181.6261
NaturalGas Unmitigated	0.0182	0.1617	0.1093	9.9000e-004		0.0126	0.0126		0.0126	0.0126	0.0000	180.5275	180.5275	3.4600e-003	3.3100e-003	181.6261

**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					
Apartments Mid Rise	1.38982e+006	7.4900e-003	0.0640	0.0273	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.1663	74.1663	1.4200e-003	1.3600e-003	74.6176
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Office Park	1.99313e+006	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3612	106.3612	2.0400e-003	1.9500e-003	107.0085
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0182</b>	<b>0.1617</b>	<b>0.1093</b>	<b>1.0000e-003</b>		<b>0.0126</b>	<b>0.0126</b>		<b>0.0126</b>	<b>0.0126</b>	<b>0.0000</b>	<b>180.5275</b>	<b>180.5275</b>	<b>3.4600e-003</b>	<b>3.3100e-003</b>	<b>181.6261</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						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Office Park	1.99313e+006	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	106.3612	106.3612	2.0400e-003	1.9500e-003		107.0085
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.38982e+006	7.4900e-003	0.0640	0.0273	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.1663	74.1663	1.4200e-003	1.3600e-003		74.6176
<b>Total</b>		<b>0.0182</b>	<b>0.1617</b>	<b>0.1093</b>	<b>1.0000e-003</b>		<b>0.0126</b>	<b>0.0126</b>		<b>0.0126</b>	<b>0.0126</b>	<b>0.0000</b>	<b>180.5275</b>	<b>180.5275</b>	<b>3.4600e-003</b>	<b>3.3100e-003</b>		<b>181.6261</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	603042	172.5706	7.9300e-003	1.6400e-003	173.2459
City Park	0	0.0000	0.0000	0.0000	0.0000
Office Park	1.94649e+006	557.0210	0.0256	5.3000e-003	559.2009
Parking Lot	172881	49.4728	2.2700e-003	4.7000e-004	49.6664
<b>Total</b>		<b>779.0644</b>	<b>0.0358</b>	<b>7.4100e-003</b>	<b>782.1133</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	603042	172.5706	7.9300e-003	1.6400e-003	173.2459
City Park	0	0.0000	0.0000	0.0000	0.0000
Office Park	1.94649e+006	557.0210	0.0256	5.3000e-003	559.2009
Parking Lot	172881	49.4728	2.2700e-003	4.7000e-004	49.6664
<b>Total</b>		<b>779.0644</b>	<b>0.0358</b>	<b>7.4100e-003</b>	<b>782.1133</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.6444	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190
Unmitigated	2.6444	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190

### 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	0.4792					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1257					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	0.0395	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190
<b>Total</b>	<b>2.6444</b>	<b>0.0149</b>	<b>1.2796</b>	<b>7.0000e-005</b>		<b>6.9800e-003</b>	<b>6.9800e-003</b>		<b>6.9800e-003</b>	<b>6.9800e-003</b>	<b>0.0000</b>	<b>2.0757</b>	<b>2.0757</b>	<b>2.0600e-003</b>	<b>0.0000</b>	<b>2.1190</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	0.4792					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.1257					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	0.0395	0.0149	1.2796	7.0000e-005		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	2.0757	2.0757	2.0600e-003	0.0000	2.1190
<b>Total</b>	<b>2.6444</b>	<b>0.0149</b>	<b>1.2796</b>	<b>7.0000e-005</b>		<b>6.9800e-003</b>	<b>6.9800e-003</b>		<b>6.9800e-003</b>	<b>6.9800e-003</b>	<b>0.0000</b>	<b>2.0757</b>	<b>2.0757</b>	<b>2.0600e-003</b>	<b>0.0000</b>	<b>2.1190</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	69.7394	0.8852	0.0214	94.9581
Unmitigated	69.7394	0.8854	0.0214	94.9718

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.1413 / 7.02389	27.8214	0.3642	8.8000e-003	38.1977
City Park	0 / 2.38296	2.3867	1.1000e-004	2.0000e-005	2.3961
Office Park	15.9427 / 9.77134	39.5312	0.5211	0.0126	54.3781
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>69.7394</b>	<b>0.8854</b>	<b>0.0214</b>	<b>94.9719</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.1413 / 7.02389	27.8214	0.3641	8.7900e-003	38.1921
City Park	0 / 2.38296	2.3867	1.1000e-004	2.0000e-005	2.3961
Office Park	15.9427 / 9.77134	39.5312	0.5210	0.0126	54.3700
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>69.7394</b>	<b>0.8852</b>	<b>0.0214</b>	<b>94.9581</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32.9353	1.9464	0.0000	73.8101
Unmitigated	32.9353	1.9464	0.0000	73.8101

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	78.66	15.9673	0.9436	0.0000	35.7837
City Park	0.17	0.0345	2.0400e-003	0.0000	0.0773
Office Park	83.42	16.9335	1.0007	0.0000	37.9491
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>32.9353</b>	<b>1.9464</b>	<b>0.0000</b>	<b>73.8101</b>



## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	78.66	15.9673	0.9436	0.0000	35.7837
City Park	0.17	0.0345	2.0400e-003	0.0000	0.0773
Office Park	83.42	16.9335	1.0007	0.0000	37.9491
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>32.9353</b>	<b>1.9464</b>	<b>0.0000</b>	<b>73.8101</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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