

## The Village Student Housing Project Humboldt County, 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	240.00	Dwelling Unit	11.00	240,000.00	800
Parking Lot	400.00	Space	0.00	120,000.00	0
User Defined Recreational	0.34	User Defined Unit	0.00	15,000.00	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	103
<b>Climate Zone</b>	1			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<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 and population according to Site Plan and Project Description. Parking lot number of spaces according to Site Plan and parking lot area according to Preliminary Stormwater Report. 0.34 acre recreational facility includes a 2-story club house.

Construction Phase - Customized per applicant construction schedule.

Off-road Equipment -

Grading - Project site is 11 acres total.

Demolition - Demolition will require removal of two warehouse buildings, two residences, and several other smaller structures. These structures are estimated to total 40,000 s.f.

Trips and VMT - Trenching trips and VMT assumed to be similar to paving.

Vehicle Trips - Vehicle trip rates based on the W-Trans Central Arcata Areawide Traffic Study (2017).

Woodstoves - The proposed residential buildings will use energy-efficient electric or gas heating. No woodstoves or fireplaces are proposed.

Sequestration - Approximately 200 trees will be planted according to the Preliminary Landscape Plan prepared by KLA Landscape Architecture.

Construction Off-road Equipment Mitigation - Construction equipment would be minimum EPA Tier 1 engines according to the applicant. The maximum speed for construction equipment will be 15 mph.

Mobile Land Use Mitigation - The project will provide a density of 21 units per acre compared to the surrounding single-family residential development (8 units per acre). The project will improve destination accessibility by locating new off-campus student housing within 0.5 miles of HSU. The project will improve the pedestrian network through the development of trails on the eastern edge and northern edge of the site.

Area Mitigation - Low VOC paints will be used for the proposed structures per the applicant.

Water Mitigation - Low flow plumbing fixtures will be installed in the proposed buildings to reduce resident water use. Water efficient irrigation systems will be used to reduce outdoor water use.

Waste Mitigation - Since the project proposes multi-family housing, the applicant is required to have recycling services. This is conservatively estimated to reduce waste disposal by 20 percent.

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	Tier	No Change	Tier 1
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tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	300.00	280.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	7/12/2019	8/2/2019

tblConstructionPhase	PhaseEndDate	3/22/2019	4/5/2019
tblConstructionPhase	PhaseEndDate	2/16/2018	2/23/2018
tblConstructionPhase	PhaseEndDate	4/12/2019	5/10/2019
tblConstructionPhase	PhaseStartDate	5/11/2019	6/1/2019
tblConstructionPhase	PhaseStartDate	2/24/2018	3/10/2018
tblConstructionPhase	PhaseStartDate	1/20/2018	1/27/2018
tblConstructionPhase	PhaseStartDate	4/6/2019	5/4/2019
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	132.00	0.00
tblFireplaces	NumberNoFireplace	24.00	240.00
tblFireplaces	NumberWood	84.00	0.00
tblGrading	AcresOfGrading	50.00	11.00
tblLandUse	LandUseSquareFeet	160,000.00	120,000.00
tblLandUse	LandUseSquareFeet	0.00	15,000.00
tblLandUse	LotAcreage	6.32	11.00
tblLandUse	LotAcreage	3.60	0.00
tblLandUse	Population	686.00	800.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSequestration	NumberOfNewTrees	0.00	200.00
tblVehicleTrips	ST_TR	7.16	7.14
tblVehicleTrips	SU_TR	6.07	6.05
tblVehicleTrips	WD_TR	6.59	6.57
tblWoodstoves	NumberCatalytic	12.00	0.00
tblWoodstoves	NumberNoncatalytic	12.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.5573	3.9952	4.8377	7.2700e-003	0.3085	0.2085	0.5171	0.0968	0.1952	0.2919	0.0000	600.3274	600.3274	0.0975	0.0000	602.3757
2019	4.1233	1.0023	1.4142	2.2700e-003	0.0799	0.0521	0.1319	0.0215	0.0491	0.0706	0.0000	180.4569	180.4569	0.0255	0.0000	180.9930
<b>Total</b>	<b>4.6806</b>	<b>4.9975</b>	<b>6.2519</b>	<b>9.5400e-003</b>	<b>0.3884</b>	<b>0.2606</b>	<b>0.6490</b>	<b>0.1183</b>	<b>0.2442</b>	<b>0.3625</b>	<b>0.0000</b>	<b>780.7843</b>	<b>780.7843</b>	<b>0.1231</b>	<b>0.0000</b>	<b>783.3687</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.8810	5.2049	7.1930	7.2700e-003	0.2614	0.2938	0.5551	0.0766	0.2930	0.3696	0.0000	600.3270	600.3270	0.0975	0.0000	602.3753
2019	4.2433	1.4560	2.0751	2.2700e-003	0.0799	0.0931	0.1730	0.0215	0.0929	0.1144	0.0000	180.4568	180.4568	0.0255	0.0000	180.9929
<b>Total</b>	<b>5.1243</b>	<b>6.6609</b>	<b>9.2681</b>	<b>9.5400e-003</b>	<b>0.3412</b>	<b>0.3869</b>	<b>0.7281</b>	<b>0.0981</b>	<b>0.3859</b>	<b>0.4840</b>	<b>0.0000</b>	<b>780.7838</b>	<b>780.7838</b>	<b>0.1231</b>	<b>0.0000</b>	<b>783.3682</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	-9.48	-33.28	-48.25	0.00	12.14	-48.46	-12.19	17.07	-58.00	-33.52	0.00	0.00	0.00	0.00	0.00	0.00

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9167	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785
Energy	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	332.3634	332.3634	0.0136	3.6100e-003	333.7676
Mobile	1.5494	4.1482	15.3577	0.0251	1.6492	0.0496	1.6987	0.4443	0.0457	0.4900	0.0000	1,845.2257	1,845.2257	0.0878	0.0000	1,847.0701
Waste						0.0000	0.0000		0.0000	0.0000	22.4102	0.0000	22.4102	1.3244	0.0000	50.2227
Water						0.0000	0.0000		0.0000	0.0000	4.9609	34.6519	39.6128	0.5111	0.0124	54.1760
<b>Total</b>	<b>3.4717</b>	<b>4.2172</b>	<b>17.1727</b>	<b>0.0255</b>	<b>1.6492</b>	<b>0.0633</b>	<b>1.7125</b>	<b>0.4443</b>	<b>0.0594</b>	<b>0.5037</b>	<b>27.3711</b>	<b>2,215.1590</b>	<b>2,242.5301</b>	<b>1.9398</b>	<b>0.0160</b>	<b>2,288.2148</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	1.9167	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785
Energy	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	332.3634	332.3634	0.0136	3.6100e-003	333.7676
Mobile	1.5386	4.0693	15.1548	0.0246	1.6123	0.0485	1.6608	0.4344	0.0447	0.4791	0.0000	1,805.1806	1,805.1806	0.0861	0.0000	1,806.9892
Waste						0.0000	0.0000		0.0000	0.0000	17.9282	0.0000	17.9282	1.0595	0.0000	40.1782
Water						0.0000	0.0000		0.0000	0.0000	3.9687	29.1167	33.0854	0.4089	9.8800e-003	44.7350
<b>Total</b>	<b>3.4609</b>	<b>4.1382</b>	<b>16.9699</b>	<b>0.0250</b>	<b>1.6123</b>	<b>0.0622</b>	<b>1.6745</b>	<b>0.4344</b>	<b>0.0584</b>	<b>0.4928</b>	<b>21.8969</b>	<b>2,169.5787</b>	<b>2,191.4756</b>	<b>1.5710</b>	<b>0.0135</b>	<b>2,228.6484</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>0.31</b>	<b>1.87</b>	<b>1.18</b>	<b>2.15</b>	<b>2.24</b>	<b>1.64</b>	<b>2.21</b>	<b>2.24</b>	<b>1.60</b>	<b>2.16</b>	<b>20.00</b>	<b>2.06</b>	<b>2.28</b>	<b>19.01</b>	<b>15.53</b>	<b>2.60</b>

## 2.3 Vegetation

### Vegetation

	CO2e
Category	MT
New Trees	141.6000
<b>Total</b>	<b>141.6000</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	1/1/2018	1/19/2018	5	15	
2	Grading	Grading	1/27/2018	2/23/2018	5	20	
3	Building Construction	Building Construction	3/10/2018	4/5/2019	5	280	
4	Paving	Paving	5/4/2019	5/10/2019	5	5	
5	Architectural Coating	Architectural Coating	6/1/2019	8/2/2019	5	45	

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

**Acres of Grading (Grading Phase): 11**

**Acres of Paving: 0**

**Residential Indoor: 486,000; Residential Outdoor: 162,000; Non-Residential Indoor: 27,900; Non-Residential Outdoor: 9,300 (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
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	182.00	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	230.00	48.00	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	46.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

### 3.2 Demolition - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.2762	0.2379	3.0000e-004		0.0136	0.0136		0.0126	0.0126	0.0000	27.1021	27.1021	7.4900e-003	0.0000	27.2595
<b>Total</b>	<b>0.0267</b>	<b>0.2762</b>	<b>0.2379</b>	<b>3.0000e-004</b>	<b>0.0197</b>	<b>0.0136</b>	<b>0.0333</b>	<b>2.9800e-003</b>	<b>0.0126</b>	<b>0.0156</b>	<b>0.0000</b>	<b>27.1021</b>	<b>27.1021</b>	<b>7.4900e-003</b>	<b>0.0000</b>	<b>27.2595</b>

### 3.2 Demolition - 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	2.5100e-003	0.0233	0.0301	7.0000e-005	1.5000e-003	3.3000e-004	1.8300e-003	4.1000e-004	3.1000e-004	7.2000e-004	0.0000	6.0107	6.0107	4.0000e-005	0.0000	6.0116
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	5.2000e-004	7.3000e-004	6.1000e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7130	0.7130	5.0000e-005	0.0000	0.7141
<b>Total</b>	<b>3.0300e-003</b>	<b>0.0240</b>	<b>0.0362</b>	<b>8.0000e-005</b>	<b>2.3700e-003</b>	<b>3.4000e-004</b>	<b>2.7100e-003</b>	<b>6.4000e-004</b>	<b>3.2000e-004</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>6.7238</b>	<b>6.7238</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>6.7257</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					8.8600e-003	0.0000	8.8600e-003	1.3400e-003	0.0000	1.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.3709	0.4087	3.0000e-004		0.0139	0.0139		0.0139	0.0139	0.0000	27.1021	27.1021	7.4900e-003	0.0000	27.2595
<b>Total</b>	<b>0.0396</b>	<b>0.3709</b>	<b>0.4087</b>	<b>3.0000e-004</b>	<b>8.8600e-003</b>	<b>0.0139</b>	<b>0.0228</b>	<b>1.3400e-003</b>	<b>0.0139</b>	<b>0.0153</b>	<b>0.0000</b>	<b>27.1021</b>	<b>27.1021</b>	<b>7.4900e-003</b>	<b>0.0000</b>	<b>27.2595</b>

**3.2 Demolition - 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	2.5100e-003	0.0233	0.0301	7.0000e-005	1.5000e-003	3.3000e-004	1.8300e-003	4.1000e-004	3.1000e-004	7.2000e-004	0.0000	6.0107	6.0107	4.0000e-005	0.0000	6.0116
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	5.2000e-004	7.3000e-004	6.1000e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7130	0.7130	5.0000e-005	0.0000	0.7141
<b>Total</b>	<b>3.0300e-003</b>	<b>0.0240</b>	<b>0.0362</b>	<b>8.0000e-005</b>	<b>2.3700e-003</b>	<b>3.4000e-004</b>	<b>2.7100e-003</b>	<b>6.4000e-004</b>	<b>3.2000e-004</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>6.7238</b>	<b>6.7238</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>6.7257</b>

**3.3 Grading - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0661	0.0000	0.0661	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0529	0.5953	0.4231	6.2000e-004		0.0279	0.0279		0.0257	0.0257	0.0000	56.3616	56.3616	0.0176	0.0000	56.7301
<b>Total</b>	<b>0.0529</b>	<b>0.5953</b>	<b>0.4231</b>	<b>6.2000e-004</b>	<b>0.0661</b>	<b>0.0279</b>	<b>0.0939</b>	<b>0.0337</b>	<b>0.0257</b>	<b>0.0594</b>	<b>0.0000</b>	<b>56.3616</b>	<b>56.3616</b>	<b>0.0176</b>	<b>0.0000</b>	<b>56.7301</b>

### 3.3 Grading - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	9.2000e-004	1.3100e-003	0.0109	2.0000e-005	1.5400e-003	1.0000e-005	1.5600e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2676	1.2676	9.0000e-005	0.0000	1.2694
<b>Total</b>	<b>9.2000e-004</b>	<b>1.3100e-003</b>	<b>0.0109</b>	<b>2.0000e-005</b>	<b>1.5400e-003</b>	<b>1.0000e-005</b>	<b>1.5600e-003</b>	<b>4.1000e-004</b>	<b>1.0000e-005</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>1.2676</b>	<b>1.2676</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2694</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					0.0297	0.0000	0.0297	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0733	0.7762	0.8699	6.2000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	56.3615	56.3615	0.0176	0.0000	56.7300
<b>Total</b>	<b>0.0733</b>	<b>0.7762</b>	<b>0.8699</b>	<b>6.2000e-004</b>	<b>0.0297</b>	<b>0.0249</b>	<b>0.0547</b>	<b>0.0152</b>	<b>0.0249</b>	<b>0.0401</b>	<b>0.0000</b>	<b>56.3615</b>	<b>56.3615</b>	<b>0.0176</b>	<b>0.0000</b>	<b>56.7300</b>

### 3.3 Grading - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	9.2000e-004	1.3100e-003	0.0109	2.0000e-005	1.5400e-003	1.0000e-005	1.5600e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2676	1.2676	9.0000e-005	0.0000	1.2694
<b>Total</b>	<b>9.2000e-004</b>	<b>1.3100e-003</b>	<b>0.0109</b>	<b>2.0000e-005</b>	<b>1.5400e-003</b>	<b>1.0000e-005</b>	<b>1.5600e-003</b>	<b>4.1000e-004</b>	<b>1.0000e-005</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>1.2676</b>	<b>1.2676</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.2694</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2816	2.4540	1.8497	2.8300e-003		0.1577	0.1577		0.1482	0.1482	0.0000	249.7920	249.7920	0.0611	0.0000	251.0757
<b>Total</b>	<b>0.2816</b>	<b>2.4540</b>	<b>1.8497</b>	<b>2.8300e-003</b>		<b>0.1577</b>	<b>0.1577</b>		<b>0.1482</b>	<b>0.1482</b>	<b>0.0000</b>	<b>249.7920</b>	<b>249.7920</b>	<b>0.0611</b>	<b>0.0000</b>	<b>251.0757</b>

**3.4 Building Construction - 2018****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0805	0.4859	0.9639	1.2000e-003	0.0318	7.3600e-003	0.0391	9.1200e-003	6.7700e-003	0.0159	0.0000	105.2850	105.2850	8.7000e-004	0.0000	105.3032
Worker	0.1116	0.1584	1.3160	2.2300e-003	0.1871	1.7200e-003	0.1888	0.0499	1.5900e-003	0.0515	0.0000	153.7952	153.7952	0.0103	0.0000	154.0122
<b>Total</b>	<b>0.1922</b>	<b>0.6443</b>	<b>2.2799</b>	<b>3.4300e-003</b>	<b>0.2189</b>	<b>9.0800e-003</b>	<b>0.2280</b>	<b>0.0590</b>	<b>8.3600e-003</b>	<b>0.0673</b>	<b>0.0000</b>	<b>259.0802</b>	<b>259.0802</b>	<b>0.0112</b>	<b>0.0000</b>	<b>259.3154</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	0.5721	3.3881	3.5874	2.8300e-003		0.2455	0.2455		0.2455	0.2455	0.0000	249.7917	249.7917	0.0611	0.0000	251.0754
<b>Total</b>	<b>0.5721</b>	<b>3.3881</b>	<b>3.5874</b>	<b>2.8300e-003</b>		<b>0.2455</b>	<b>0.2455</b>		<b>0.2455</b>	<b>0.2455</b>	<b>0.0000</b>	<b>249.7917</b>	<b>249.7917</b>	<b>0.0611</b>	<b>0.0000</b>	<b>251.0754</b>

**3.4 Building Construction - 2018****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0805	0.4859	0.9639	1.2000e-003	0.0318	7.3600e-003	0.0391	9.1200e-003	6.7700e-003	0.0159	0.0000	105.2850	105.2850	8.7000e-004	0.0000	105.3032
Worker	0.1116	0.1584	1.3160	2.2300e-003	0.1871	1.7200e-003	0.1888	0.0499	1.5900e-003	0.0515	0.0000	153.7952	153.7952	0.0103	0.0000	154.0122
<b>Total</b>	<b>0.1922</b>	<b>0.6443</b>	<b>2.2799</b>	<b>3.4300e-003</b>	<b>0.2189</b>	<b>9.0800e-003</b>	<b>0.2280</b>	<b>0.0590</b>	<b>8.3600e-003</b>	<b>0.0673</b>	<b>0.0000</b>	<b>259.0802</b>	<b>259.0802</b>	<b>0.0112</b>	<b>0.0000</b>	<b>259.3154</b>

**3.4 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0811	0.7233	0.5907	9.2000e-004		0.0443	0.0443		0.0417	0.0417	0.0000	80.7724	80.7724	0.0197	0.0000	81.1851
<b>Total</b>	<b>0.0811</b>	<b>0.7233</b>	<b>0.5907</b>	<b>9.2000e-004</b>		<b>0.0443</b>	<b>0.0443</b>		<b>0.0417</b>	<b>0.0417</b>	<b>0.0000</b>	<b>80.7724</b>	<b>80.7724</b>	<b>0.0197</b>	<b>0.0000</b>	<b>81.1851</b>



### 3.4 Building Construction - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.1473	0.3058	3.9000e-004	0.0104	2.2200e-003	0.0126	2.9800e-003	2.0400e-003	5.0200e-003	0.0000	33.8819	33.8819	2.7000e-004	0.0000	33.8877
Worker	0.0331	0.0468	0.3879	7.3000e-004	0.0612	5.4000e-004	0.0617	0.0163	5.0000e-004	0.0168	0.0000	48.4936	48.4936	3.1100e-003	0.0000	48.5589
<b>Total</b>	<b>0.0583</b>	<b>0.1941</b>	<b>0.6937</b>	<b>1.1200e-003</b>	<b>0.0716</b>	<b>2.7600e-003</b>	<b>0.0743</b>	<b>0.0193</b>	<b>2.5400e-003</b>	<b>0.0218</b>	<b>0.0000</b>	<b>82.3755</b>	<b>82.3755</b>	<b>3.3800e-003</b>	<b>0.0000</b>	<b>82.4465</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	0.1871	1.1080	1.1731	9.2000e-004		0.0803	0.0803		0.0803	0.0803	0.0000	80.7723	80.7723	0.0197	0.0000	81.1850
<b>Total</b>	<b>0.1871</b>	<b>1.1080</b>	<b>1.1731</b>	<b>9.2000e-004</b>		<b>0.0803</b>	<b>0.0803</b>		<b>0.0803</b>	<b>0.0803</b>	<b>0.0000</b>	<b>80.7723</b>	<b>80.7723</b>	<b>0.0197</b>	<b>0.0000</b>	<b>81.1850</b>

### 3.4 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.1473	0.3058	3.9000e-004	0.0104	2.2200e-003	0.0126	2.9800e-003	2.0400e-003	5.0200e-003	0.0000	33.8819	33.8819	2.7000e-004	0.0000	33.8877
Worker	0.0331	0.0468	0.3879	7.3000e-004	0.0612	5.4000e-004	0.0617	0.0163	5.0000e-004	0.0168	0.0000	48.4936	48.4936	3.1100e-003	0.0000	48.5589
<b>Total</b>	<b>0.0583</b>	<b>0.1941</b>	<b>0.6937</b>	<b>1.1200e-003</b>	<b>0.0716</b>	<b>2.7600e-003</b>	<b>0.0743</b>	<b>0.0193</b>	<b>2.5400e-003</b>	<b>0.0218</b>	<b>0.0000</b>	<b>82.3755</b>	<b>82.3755</b>	<b>3.3800e-003</b>	<b>0.0000</b>	<b>82.4465</b>

### 3.5 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5600e-003	0.0373	0.0359	6.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	5.0099	5.0099	1.5900e-003	0.0000	5.0432
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>3.5600e-003</b>	<b>0.0373</b>	<b>0.0359</b>	<b>6.0000e-005</b>		<b>2.0200e-003</b>	<b>2.0200e-003</b>		<b>1.8600e-003</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>5.0099</b>	<b>5.0099</b>	<b>1.5900e-003</b>	<b>0.0000</b>	<b>5.0432</b>

### 3.5 Paving - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.2000e-004	1.8300e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2292	0.2292	1.0000e-005	0.0000	0.2295
<b>Total</b>	<b>1.6000e-004</b>	<b>2.2000e-004</b>	<b>1.8300e-003</b>	<b>0.0000</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>2.9000e-004</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.2292</b>	<b>0.2292</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.2295</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	0.0104	0.0748	0.0789	6.0000e-005		3.8800e-003	3.8800e-003		3.8800e-003	3.8800e-003	0.0000	5.0099	5.0099	1.5900e-003	0.0000	5.0432
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>0.0104</b>	<b>0.0748</b>	<b>0.0789</b>	<b>6.0000e-005</b>		<b>3.8800e-003</b>	<b>3.8800e-003</b>		<b>3.8800e-003</b>	<b>3.8800e-003</b>	<b>0.0000</b>	<b>5.0099</b>	<b>5.0099</b>	<b>1.5900e-003</b>	<b>0.0000</b>	<b>5.0432</b>

### 3.5 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.2000e-004	1.8300e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2292	0.2292	1.0000e-005	0.0000	0.2295
<b>Total</b>	<b>1.6000e-004</b>	<b>2.2000e-004</b>	<b>1.8300e-003</b>	<b>0.0000</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>2.9000e-004</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.2292</b>	<b>0.2292</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.2295</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9699					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9900e-003	0.0413	0.0414	7.0000e-005		2.9000e-003	2.9000e-003		2.9000e-003	2.9000e-003	0.0000	5.7448	5.7448	4.9000e-004	0.0000	5.7550
<b>Total</b>	<b>3.9759</b>	<b>0.0413</b>	<b>0.0414</b>	<b>7.0000e-005</b>		<b>2.9000e-003</b>	<b>2.9000e-003</b>		<b>2.9000e-003</b>	<b>2.9000e-003</b>	<b>0.0000</b>	<b>5.7448</b>	<b>5.7448</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>5.7550</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	4.3200e-003	6.1000e-003	0.0506	1.0000e-004	7.9800e-003	7.0000e-005	8.0500e-003	2.1300e-003	7.0000e-005	2.1900e-003	0.0000	6.3253	6.3253	4.1000e-004	0.0000	6.3338	
<b>Total</b>	<b>4.3200e-003</b>	<b>6.1000e-003</b>	<b>0.0506</b>	<b>1.0000e-004</b>	<b>7.9800e-003</b>	<b>7.0000e-005</b>	<b>8.0500e-003</b>	<b>2.1300e-003</b>	<b>7.0000e-005</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>6.3253</b>	<b>6.3253</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>6.3338</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	3.9699					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.0729	0.0769	7.0000e-005		6.1500e-003	6.1500e-003		6.1500e-003	6.1500e-003	0.0000	5.7448	5.7448	4.9000e-004	0.0000	5.7550
<b>Total</b>	<b>3.9831</b>	<b>0.0729</b>	<b>0.0769</b>	<b>7.0000e-005</b>		<b>6.1500e-003</b>	<b>6.1500e-003</b>		<b>6.1500e-003</b>	<b>6.1500e-003</b>	<b>0.0000</b>	<b>5.7448</b>	<b>5.7448</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>5.7550</b>

### 3.6 Architectural Coating - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3200e-003	6.1000e-003	0.0506	1.0000e-004	7.9800e-003	7.0000e-005	8.0500e-003	2.1300e-003	7.0000e-005	2.1900e-003	0.0000	6.3253	6.3253	4.1000e-004	0.0000	6.3338
<b>Total</b>	<b>4.3200e-003</b>	<b>6.1000e-003</b>	<b>0.0506</b>	<b>1.0000e-004</b>	<b>7.9800e-003</b>	<b>7.0000e-005</b>	<b>8.0500e-003</b>	<b>2.1300e-003</b>	<b>7.0000e-005</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>6.3253</b>	<b>6.3253</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>6.3338</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	1.5386	4.0693	15.1548	0.0246	1.6123	0.0485	1.6608	0.4344	0.0447	0.4791	0.0000	1,805.1806	1,805.1806	0.0861	0.0000	1,806.9892
Unmitigated	1.5494	4.1482	15.3577	0.0251	1.6492	0.0496	1.6987	0.4443	0.0457	0.4900	0.0000	1,845.2257	1,845.2257	0.0878	0.0000	1,847.0701

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,576.80	1,713.60	1452.00	4,518,101	4,417,054
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,576.80</b>	<b>1,713.60</b>	<b>1,452.00</b>	<b>4,518,101</b>	<b>4,417,054</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	42.30	19.60	38.10	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	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
0.423087	0.106890	0.174292	0.131313	0.085944	0.009008	0.014986	0.038396	0.002248	0.001583	0.007907	0.001288	0.003056

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	276.5870	276.5870	0.0125	2.5900e-003	277.6518
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	276.5870	276.5870	0.0125	2.5900e-003	277.6518
NaturalGas Mitigated	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7764	55.7764	1.0700e-003	1.0200e-003	56.1158
NaturalGas Unmitigated	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7764	55.7764	1.0700e-003	1.0200e-003	56.1158



### 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					
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
User Defined Recreational	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	1.04521e+006	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7764	55.7764	1.0700e-003	1.0200e-003	56.1158
<b>Total</b>		<b>5.6400e-003</b>	<b>0.0482</b>	<b>0.0205</b>	<b>3.1000e-004</b>		<b>3.8900e-003</b>	<b>3.8900e-003</b>		<b>3.8900e-003</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>55.7764</b>	<b>55.7764</b>	<b>1.0700e-003</b>	<b>1.0200e-003</b>	<b>56.1158</b>

#### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	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	1.04521e+006	5.6400e-003	0.0482	0.0205	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7764	55.7764	1.0700e-003	1.0200e-003	56.1158
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>5.6400e-003</b>	<b>0.0482</b>	<b>0.0205</b>	<b>3.1000e-004</b>		<b>3.8900e-003</b>	<b>3.8900e-003</b>		<b>3.8900e-003</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>55.7764</b>	<b>55.7764</b>	<b>1.0700e-003</b>	<b>1.0200e-003</b>	<b>56.1158</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	845160	245.8667	0.0111	2.3000e-003	246.8133
Parking Lot	105600	30.7203	1.3900e-003	2.9000e-004	30.8385
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>276.5870</b>	<b>0.0125</b>	<b>2.5900e-003</b>	<b>277.6518</b>

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	845160	245.8667	0.0111	2.3000e-003	246.8133
Parking Lot	105600	30.7203	1.3900e-003	2.9000e-004	30.8385
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>276.5870</b>	<b>0.0125</b>	<b>2.5900e-003</b>	<b>277.6518</b>

### 6.0 Area Detail

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### 6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9167	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785
Unmitigated	1.9167	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785

## 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	0.3970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4646					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	0.0552	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785
<b>Total</b>	<b>1.9167</b>	<b>0.0208</b>	<b>1.7946</b>	<b>9.0000e-005</b>		<b>9.8300e-003</b>	<b>9.8300e-003</b>		<b>9.8300e-003</b>	<b>9.8300e-003</b>	<b>0.0000</b>	<b>2.9181</b>	<b>2.9181</b>	<b>2.8800e-003</b>	<b>0.0000</b>	<b>2.9785</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	0.3970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4646					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	0.0552	0.0208	1.7946	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9181	2.9181	2.8800e-003	0.0000	2.9785
<b>Total</b>	<b>1.9167</b>	<b>0.0208</b>	<b>1.7946</b>	<b>9.0000e-005</b>		<b>9.8300e-003</b>	<b>9.8300e-003</b>		<b>9.8300e-003</b>	<b>9.8300e-003</b>	<b>0.0000</b>	<b>2.9181</b>	<b>2.9181</b>	<b>2.8800e-003</b>	<b>0.0000</b>	<b>2.9785</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	33.0854	0.4089	9.8800e-003	44.7350
Unmitigated	39.6128	0.5111	0.0124	54.1760

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.637 / 9.85809	39.6128	0.5111	0.0124	54.1760
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>39.6128</b>	<b>0.5111</b>	<b>0.0124</b>	<b>54.1760</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	12.5096 / 9.25674	33.0854	0.4089	9.8800e-003	44.7350
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>33.0854</b>	<b>0.4089</b>	<b>9.8800e-003</b>	<b>44.7350</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	17.9282	1.0595	0.0000	40.1782
Unmitigated	22.4102	1.3244	0.0000	50.2227

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	110.4	22.4102	1.3244	0.0000	50.2227
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>22.4102</b>	<b>1.3244</b>	<b>0.0000</b>	<b>50.2227</b>



## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	88.32	17.9282	1.0595	0.0000	40.1782
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>17.9282</b>	<b>1.0595</b>	<b>0.0000</b>	<b>40.1782</b>

## 9.0 Operational Offroad

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	141.6000	0.0000	0.0000	141.6000

### 10.2 Net New Trees

#### Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	200	141.6000	0.0000	0.0000	141.6000
<b>Total</b>		<b>141.6000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>141.6000</b>

## The Village Student Housing Project Humboldt County, Summer

### 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	240.00	Dwelling Unit	11.00	240,000.00	800
Parking Lot	400.00	Space	0.00	120,000.00	0
User Defined Recreational	0.34	User Defined Unit	0.00	15,000.00	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	103
<b>Climate Zone</b>	1			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<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 and population according to Site Plan and Project Description. Parking lot number of spaces according to Site Plan and parking lot area according to Preliminary Stormwater Report. 0.34 acre recreational facility includes a 2-story club house.

Construction Phase - Customized per applicant construction schedule.

Off-road Equipment -

Grading - Project site is 11 acres total.

Demolition - Demolition will require removal of two warehouse buildings, two residences, and several other smaller structures. These structures are estimated to total 40,000 s.f.

Trips and VMT - Trenching trips and VMT assumed to be similar to paving.

Vehicle Trips - Vehicle trip rates based on the W-Trans Central Arcata Areawide Traffic Study (2017).

Woodstoves - The proposed residential buildings will use energy-efficient electric or gas heating. No woodstoves or fireplaces are proposed.

Sequestration - Approximately 200 trees will be planted according to the Preliminary Landscape Plan prepared by KLA Landscape Architecture.

Construction Off-road Equipment Mitigation - Construction equipment would be minimum EPA Tier 1 engines according to the applicant. The maximum speed for construction equipment will be 15 mph.

Mobile Land Use Mitigation - The project will provide a density of 21 units per acre compared to the surrounding single-family residential development (8 units per acre). The project will improve destination accessibility by locating new off-campus student housing within 0.5 miles of HSU. The project will improve the pedestrian network through the development of trails on the eastern edge and northern edge of the site.

Area Mitigation - Low VOC paints will be used for the proposed structures per the applicant.

Water Mitigation - Low flow plumbing fixtures will be installed in the proposed buildings to reduce resident water use. Water efficient irrigation systems will be used to reduce outdoor water use.

Waste Mitigation - Since the project proposes multi-family housing, the applicant is required to have recycling services. This is conservatively estimated to reduce waste disposal by 20 percent.

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	300.00	280.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	7/12/2019	8/2/2019

tblConstructionPhase	PhaseEndDate	3/22/2019	4/5/2019
tblConstructionPhase	PhaseEndDate	2/16/2018	2/23/2018
tblConstructionPhase	PhaseEndDate	4/12/2019	5/10/2019
tblConstructionPhase	PhaseStartDate	5/11/2019	6/1/2019
tblConstructionPhase	PhaseStartDate	2/24/2018	3/10/2018
tblConstructionPhase	PhaseStartDate	1/20/2018	1/27/2018
tblConstructionPhase	PhaseStartDate	4/6/2019	5/4/2019
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	132.00	0.00
tblFireplaces	NumberNoFireplace	24.00	240.00
tblFireplaces	NumberWood	84.00	0.00
tblGrading	AcresOfGrading	50.00	11.00
tblLandUse	LandUseSquareFeet	160,000.00	120,000.00
tblLandUse	LandUseSquareFeet	0.00	15,000.00
tblLandUse	LotAcreage	6.32	11.00
tblLandUse	LotAcreage	3.60	0.00
tblLandUse	Population	686.00	800.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSequestration	NumberOfNewTrees	0.00	200.00
tblVehicleTrips	ST_TR	7.16	7.14
tblVehicleTrips	SU_TR	6.07	6.05
tblVehicleTrips	WD_TR	6.59	6.57
tblWoodstoves	NumberCatalytic	12.00	0.00
tblWoodstoves	NumberNoncatalytic	12.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.3763	59.6545	43.3369	0.0636	6.7697	2.7894	9.5591	3.4168	2.5663	5.9831	0.0000	6,352.457 2	6,352.457 2	1.9435	0.0000	6,393.271 1
2019	176.8866	26.4468	34.7741	0.0593	2.2070	1.3647	3.5717	0.5916	1.2817	1.8733	0.0000	5,215.363 5	5,215.363 5	0.7359	0.0000	5,230.818 0
<b>Total</b>	<b>182.2629</b>	<b>86.1012</b>	<b>78.1110</b>	<b>0.1229</b>	<b>8.9767</b>	<b>4.1542</b>	<b>13.1308</b>	<b>4.0084</b>	<b>3.8480</b>	<b>7.8564</b>	<b>0.0000</b>	<b>11,567.82 07</b>	<b>11,567.82 07</b>	<b>2.6795</b>	<b>0.0000</b>	<b>11,624.08 91</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	7.4119	77.7440	88.0178	0.0636	3.1367	2.4944	5.6311	1.5615	2.4943	4.0558	0.0000	6,352.457 2	6,352.457 2	1.9435	0.0000	6,393.271 1
2019	177.2095	37.5962	51.6577	0.0593	2.2070	2.4064	4.6134	0.5916	2.4001	2.9918	0.0000	5,215.363 5	5,215.363 5	0.7359	0.0000	5,230.818 0
<b>Total</b>	<b>184.6214</b>	<b>115.3402</b>	<b>139.6755</b>	<b>0.1229</b>	<b>5.3437</b>	<b>4.9008</b>	<b>10.2445</b>	<b>2.1532</b>	<b>4.8944</b>	<b>7.0476</b>	<b>0.0000</b>	<b>11,567.82 07</b>	<b>11,567.82 07</b>	<b>2.6795</b>	<b>0.0000</b>	<b>11,624.08 91</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	-1.29	-33.96	-78.82	0.00	40.47	-17.97	21.98	46.28	-27.19	10.30	0.00	0.00	0.00	0.00	0.00	0.00



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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Energy	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
Mobile	8.6561	23.9844	82.9304	0.1499	10.4653	0.2953	10.7606	2.8045	0.2720	3.0766		12,149.4473	12,149.4473	0.5779		12,161.5831
<b>Total</b>	<b>19.5003</b>	<b>24.4792</b>	<b>102.9824</b>	<b>0.1527</b>	<b>10.4653</b>	<b>0.4258</b>	<b>10.8911</b>	<b>2.8045</b>	<b>0.4026</b>	<b>3.2071</b>	<b>0.0000</b>	<b>12,522.0801</b>	<b>12,522.0801</b>	<b>0.6196</b>	<b>6.1800e-003</b>	<b>12,537.0061</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Energy	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
Mobile	8.5921	23.5282	81.7398	0.1467	10.2312	0.2891	10.5203	2.7418	0.2663	3.0081		11,885.9348	11,885.9348	0.5667		11,897.8350
<b>Total</b>	<b>19.4363</b>	<b>24.0230</b>	<b>101.7918</b>	<b>0.1494</b>	<b>10.2312</b>	<b>0.4196</b>	<b>10.6508</b>	<b>2.7418</b>	<b>0.3969</b>	<b>3.1387</b>	<b>0.0000</b>	<b>12,258.5677</b>	<b>12,258.5677</b>	<b>0.6084</b>	<b>6.1800e-003</b>	<b>12,273.2581</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	0.33	1.86	1.16	2.12	2.24	1.45	2.21	2.24	1.42	2.13	0.00	2.10	2.10	1.81	0.00	2.10

### 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	1/1/2018	1/19/2018	5	15	
2	Grading	Grading	1/27/2018	2/23/2018	5	20	
3	Building Construction	Building Construction	3/10/2018	4/5/2019	5	280	
4	Paving	Paving	5/4/2019	5/10/2019	5	5	
5	Architectural Coating	Architectural Coating	6/1/2019	8/2/2019	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 11

Acres of Paving: 0

Residential Indoor: 486,000; Residential Outdoor: 162,000; Non-Residential Indoor: 27,900; Non-Residential Outdoor: 9,300 (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
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	182.00	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	230.00	48.00	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	46.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Demolition - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6249	0.0000	2.6249	0.3974	0.0000	0.3974			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.328 2	3,983.328 2	1.1015		4,006.458 5
<b>Total</b>	<b>3.5606</b>	<b>36.8310</b>	<b>31.7250</b>	<b>0.0399</b>	<b>2.6249</b>	<b>1.8090</b>	<b>4.4339</b>	<b>0.3974</b>	<b>1.6856</b>	<b>2.0830</b>		<b>3,983.328 2</b>	<b>3,983.328 2</b>	<b>1.1015</b>		<b>4,006.458 5</b>

### 3.2 Demolition - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3036	3.0673	3.2436	9.0700e-003	0.2112	0.0442	0.2554	0.0578	0.0406	0.0985		884.2987	884.2987	6.2000e-003		884.4290
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0905	0.7726	1.3800e-003	0.1232	1.0600e-003	0.1243	0.0327	9.8000e-004	0.0337		104.7398	104.7398	7.0400e-003		104.8876
<b>Total</b>	<b>0.3687</b>	<b>3.1578</b>	<b>4.0162</b>	<b>0.0105</b>	<b>0.3345</b>	<b>0.0452</b>	<b>0.3797</b>	<b>0.0905</b>	<b>0.0416</b>	<b>0.1321</b>		<b>989.0385</b>	<b>989.0385</b>	<b>0.0132</b>		<b>989.3166</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1812	0.0000	1.1812	0.1789	0.0000	0.1789			0.0000			0.0000
Off-Road	5.2791	49.4583	54.4963	0.0399		1.8567	1.8567		1.8567	1.8567	0.0000	3,983.328 2	3,983.328 2	1.1015		4,006.458 5
<b>Total</b>	<b>5.2791</b>	<b>49.4583</b>	<b>54.4963</b>	<b>0.0399</b>	<b>1.1812</b>	<b>1.8567</b>	<b>3.0379</b>	<b>0.1789</b>	<b>1.8567</b>	<b>2.0356</b>	<b>0.0000</b>	<b>3,983.328 2</b>	<b>3,983.328 2</b>	<b>1.1015</b>		<b>4,006.458 5</b>

### 3.2 Demolition - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3036	3.0673	3.2436	9.0700e-003	0.2112	0.0442	0.2554	0.0578	0.0406	0.0985		884.2987	884.2987	6.2000e-003		884.4290
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0905	0.7726	1.3800e-003	0.1232	1.0600e-003	0.1243	0.0327	9.8000e-004	0.0337		104.7398	104.7398	7.0400e-003		104.8876
<b>Total</b>	<b>0.3687</b>	<b>3.1578</b>	<b>4.0162</b>	<b>0.0105</b>	<b>0.3345</b>	<b>0.0452</b>	<b>0.3797</b>	<b>0.0905</b>	<b>0.0416</b>	<b>0.1321</b>		<b>989.0385</b>	<b>989.0385</b>	<b>0.0132</b>		<b>989.3166</b>

### 3.3 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6054	0.0000	6.6054	3.3732	0.0000	3.3732			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
<b>Total</b>	<b>5.2895</b>	<b>59.5338</b>	<b>42.3068</b>	<b>0.0617</b>	<b>6.6054</b>	<b>2.7880</b>	<b>9.3934</b>	<b>3.3732</b>	<b>2.5650</b>	<b>5.9382</b>		<b>6,212.8042</b>	<b>6,212.8042</b>	<b>1.9341</b>		<b>6,253.4209</b>

### 3.3 Grading - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0868	0.1207	1.0301	1.8400e-003	0.1643	1.4200e-003	0.1657	0.0436	1.3100e-003	0.0449		139.6531	139.6531	9.3900e-003		139.8502
<b>Total</b>	<b>0.0868</b>	<b>0.1207</b>	<b>1.0301</b>	<b>1.8400e-003</b>	<b>0.1643</b>	<b>1.4200e-003</b>	<b>0.1657</b>	<b>0.0436</b>	<b>1.3100e-003</b>	<b>0.0449</b>		<b>139.6531</b>	<b>139.6531</b>	<b>9.3900e-003</b>		<b>139.8502</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9724	0.0000	2.9724	1.5179	0.0000	1.5179			0.0000			0.0000
Off-Road	7.3251	77.6234	86.9877	0.0617		2.4930	2.4930		2.4930	2.4930	0.0000	6,212.8041	6,212.8041	1.9341		6,253.4209
<b>Total</b>	<b>7.3251</b>	<b>77.6234</b>	<b>86.9877</b>	<b>0.0617</b>	<b>2.9724</b>	<b>2.4930</b>	<b>5.4654</b>	<b>1.5179</b>	<b>2.4930</b>	<b>4.0109</b>	<b>0.0000</b>	<b>6,212.8041</b>	<b>6,212.8041</b>	<b>1.9341</b>		<b>6,253.4209</b>

### 3.3 Grading - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0868	0.1207	1.0301	1.8400e-003	0.1643	1.4200e-003	0.1657	0.0436	1.3100e-003	0.0449		139.6531	139.6531	9.3900e-003			139.8502
<b>Total</b>	<b>0.0868</b>	<b>0.1207</b>	<b>1.0301</b>	<b>1.8400e-003</b>	<b>0.1643</b>	<b>1.4200e-003</b>	<b>0.1657</b>	<b>0.0436</b>	<b>1.3100e-003</b>	<b>0.0449</b>		<b>139.6531</b>	<b>139.6531</b>	<b>9.3900e-003</b>			<b>139.8502</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>			<b>2,623.3517</b>



### 3.4 Building Construction - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.6805	4.5617	7.1876	0.0114	0.3175	0.0693	0.3868	0.0904	0.0637	0.1542		1,103.6137	1,103.6137	8.9500e-003			1,103.8016
Worker	0.9979	1.3878	11.8458	0.0211	1.8894	0.0163	1.9057	0.5012	0.0151	0.5162		1,606.0104	1,606.0104	0.1079			1,608.2770
<b>Total</b>	<b>1.6784</b>	<b>5.9495</b>	<b>19.0335</b>	<b>0.0325</b>	<b>2.2069</b>	<b>0.0856</b>	<b>2.2925</b>	<b>0.5916</b>	<b>0.0788</b>	<b>0.6704</b>		<b>2,709.6240</b>	<b>2,709.6240</b>	<b>0.1169</b>			<b>2,712.0786</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,609.9389	2,609.9389	0.6387			2,623.3517
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>			<b>2,623.3517</b>

### 3.4 Building Construction - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.6805	4.5617	7.1876	0.0114	0.3175	0.0693	0.3868	0.0904	0.0637	0.1542		1,103.6137	1,103.6137	8.9500e-003			1,103.8016
Worker	0.9979	1.3878	11.8458	0.0211	1.8894	0.0163	1.9057	0.5012	0.0151	0.5162		1,606.0104	1,606.0104	0.1079			1,608.2770
<b>Total</b>	<b>1.6784</b>	<b>5.9495</b>	<b>19.0335</b>	<b>0.0325</b>	<b>2.2069</b>	<b>0.0856</b>	<b>2.2925</b>	<b>0.5916</b>	<b>0.0788</b>	<b>0.6704</b>		<b>2,709.6240</b>	<b>2,709.6240</b>	<b>0.1169</b>			<b>2,712.0786</b>

### 3.4 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279			2,593.9479
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>			<b>2,593.9479</b>

### 3.4 Building Construction - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.6509	4.2283	6.9586	0.0114	0.3176	0.0640	0.3816	0.0905	0.0588	0.1493		1,086.0610	1,086.0610	8.6500e-003			1,086.2427
Worker	0.9057	1.2534	10.6952	0.0211	1.8894	0.0157	1.9051	0.5012	0.0146	0.5157		1,548.5407	1,548.5407	0.0994			1,550.6274
<b>Total</b>	<b>1.5565</b>	<b>5.4817</b>	<b>17.6538</b>	<b>0.0325</b>	<b>2.2070</b>	<b>0.0797</b>	<b>2.2867</b>	<b>0.5917</b>	<b>0.0734</b>	<b>0.6650</b>		<b>2,634.6017</b>	<b>2,634.6017</b>	<b>0.1080</b>			<b>2,636.8701</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>			<b>2,593.9479</b>

### 3.4 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.6509	4.2283	6.9586	0.0114	0.3176	0.0640	0.3816	0.0905	0.0588	0.1493		1,086.0610	1,086.0610	8.6500e-003			1,086.2427
Worker	0.9057	1.2534	10.6952	0.0211	1.8894	0.0157	1.9051	0.5012	0.0146	0.5157		1,548.5407	1,548.5407	0.0994			1,550.6274
<b>Total</b>	<b>1.5565</b>	<b>5.4817</b>	<b>17.6538</b>	<b>0.0325</b>	<b>2.2070</b>	<b>0.0797</b>	<b>2.2867</b>	<b>0.5917</b>	<b>0.0734</b>	<b>0.6650</b>		<b>2,634.6017</b>	<b>2,634.6017</b>	<b>0.1080</b>			<b>2,636.8701</b>

### 3.5 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>1.4259</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>		<b>2,208.9731</b>	<b>2,208.9731</b>	<b>0.6989</b>			<b>2,223.6499</b>

### 3.5 Paving - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0591	0.0817	0.6975	1.3800e-003	0.1232	1.0300e-003	0.1243	0.0327	9.5000e-004	0.0336		100.9918	100.9918	6.4800e-003			101.1279
<b>Total</b>	<b>0.0591</b>	<b>0.0817</b>	<b>0.6975</b>	<b>1.3800e-003</b>	<b>0.1232</b>	<b>1.0300e-003</b>	<b>0.1243</b>	<b>0.0327</b>	<b>9.5000e-004</b>	<b>0.0336</b>		<b>100.9918</b>	<b>100.9918</b>	<b>6.4800e-003</b>			<b>101.1279</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	4.1483	29.9207	31.5677	0.0223		1.5517	1.5517		1.5517	1.5517	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>4.1483</b>	<b>29.9207</b>	<b>31.5677</b>	<b>0.0223</b>		<b>1.5517</b>	<b>1.5517</b>		<b>1.5517</b>	<b>1.5517</b>	<b>0.0000</b>	<b>2,208.9731</b>	<b>2,208.9731</b>	<b>0.6989</b>			<b>2,223.6499</b>

### 3.5 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0591	0.0817	0.6975	1.3800e-003	0.1232	1.0300e-003	0.1243	0.0327	9.5000e-004	0.0336		100.9918	100.9918	6.4800e-003		101.1279
<b>Total</b>	<b>0.0591</b>	<b>0.0817</b>	<b>0.6975</b>	<b>1.3800e-003</b>	<b>0.1232</b>	<b>1.0300e-003</b>	<b>0.1243</b>	<b>0.0327</b>	<b>9.5000e-004</b>	<b>0.0336</b>		<b>100.9918</b>	<b>100.9918</b>	<b>6.4800e-003</b>		<b>101.1279</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	176.4390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
<b>Total</b>	<b>176.7054</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>281.9473</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1811	0.2507	2.1390	4.2200e-003	0.3779	3.1500e-003	0.3810	0.1002	2.9100e-003	0.1031		309.7081	309.7081	0.0199			310.1255
<b>Total</b>	<b>0.1811</b>	<b>0.2507</b>	<b>2.1390</b>	<b>4.2200e-003</b>	<b>0.3779</b>	<b>3.1500e-003</b>	<b>0.3810</b>	<b>0.1002</b>	<b>2.9100e-003</b>	<b>0.1031</b>		<b>309.7081</b>	<b>309.7081</b>	<b>0.0199</b>			<b>310.1255</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	176.4390					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0238			281.9473
<b>Total</b>	<b>177.0283</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>			<b>281.9473</b>

### 3.6 Architectural Coating - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1811	0.2507	2.1390	4.2200e-003	0.3779	3.1500e-003	0.3810	0.1002	2.9100e-003	0.1031		309.7081	309.7081	0.0199			310.1255
<b>Total</b>	<b>0.1811</b>	<b>0.2507</b>	<b>2.1390</b>	<b>4.2200e-003</b>	<b>0.3779</b>	<b>3.1500e-003</b>	<b>0.3810</b>	<b>0.1002</b>	<b>2.9100e-003</b>	<b>0.1031</b>		<b>309.7081</b>	<b>309.7081</b>	<b>0.0199</b>			<b>310.1255</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Improve Pedestrian Network



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5921	23.5282	81.7398	0.1467	10.2312	0.2891	10.5203	2.7418	0.2663	3.0081		11,885.93 48	11,885.93 48	0.5667		11,897.83 50
Unmitigated	8.6561	23.9844	82.9304	0.1499	10.4653	0.2953	10.7606	2.8045	0.2720	3.0766		12,149.44 73	12,149.44 73	0.5779		12,161.58 31

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,576.80	1,713.60	1452.00	4,518,101	4,417,054
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,576.80</b>	<b>1,713.60</b>	<b>1,452.00</b>	<b>4,518,101</b>	<b>4,417,054</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	42.30	19.60	38.10	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	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
0.423087	0.106890	0.174292	0.131313	0.085944	0.009008	0.014986	0.038396	0.002248	0.001583	0.007907	0.001288	0.003056

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
NaturalGas Unmitigated	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	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
Apartments Mid Rise	2863.59	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
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
<b>Total</b>		<b>0.0309</b>	<b>0.2639</b>	<b>0.1123</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>		<b>336.8927</b>	<b>336.8927</b>	<b>6.4600e-003</b>	<b>6.1800e-003</b>	<b>338.9430</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	lb/day										lb/day					
User Defined Recreational	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
Apartments Mid Rise	2.86359	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
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
<b>Total</b>		<b>0.0309</b>	<b>0.2639</b>	<b>0.1123</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>		<b>336.8927</b>	<b>336.8927</b>	<b>6.4600e-003</b>	<b>6.1800e-003</b>	<b>338.9430</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Unmitigated	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0250					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	0.6130	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092		35.7402	35.7402	0.0352		36.4801
<b>Total</b>	<b>10.8133</b>	<b>0.2309</b>	<b>19.9396</b>	<b>1.0500e-003</b>		<b>0.1092</b>	<b>0.1092</b>		<b>0.1092</b>	<b>0.1092</b>	<b>0.0000</b>	<b>35.7402</b>	<b>35.7402</b>	<b>0.0352</b>	<b>0.0000</b>	<b>36.4801</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	lb/day										lb/day					
Architectural Coating	2.1753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0250					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	0.6130	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092		35.7402	35.7402	0.0352		36.4801
<b>Total</b>	<b>10.8133</b>	<b>0.2309</b>	<b>19.9396</b>	<b>1.0500e-003</b>		<b>0.1092</b>	<b>0.1092</b>		<b>0.1092</b>	<b>0.1092</b>	<b>0.0000</b>	<b>35.7402</b>	<b>35.7402</b>	<b>0.0352</b>	<b>0.0000</b>	<b>36.4801</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

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

## 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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## The Village Student Housing Project Humboldt County, Winter

### 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	240.00	Dwelling Unit	11.00	240,000.00	800
Parking Lot	400.00	Space	0.00	120,000.00	0
User Defined Recreational	0.34	User Defined Unit	0.00	15,000.00	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	103
<b>Climate Zone</b>	1			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<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 and population according to Site Plan and Project Description. Parking lot number of spaces according to Site Plan and parking lot area according to Preliminary Stormwater Report. 0.34 acre recreational facility includes a 2-story club house.

Construction Phase - Customized per applicant construction schedule.

Off-road Equipment -

Grading - Project site is 11 acres total.

Demolition - Demolition will require removal of two warehouse buildings, two residences, and several other smaller structures. These structures are estimated to total 40,000 s.f.

Trips and VMT - Trenching trips and VMT assumed to be similar to paving.

Vehicle Trips - Vehicle trip rates based on the W-Trans Central Arcata Areawide Traffic Study (2017).

Woodstoves - The proposed residential buildings will use energy-efficient electric or gas heating. No woodstoves or fireplaces are proposed.

Sequestration - Approximately 200 trees will be planted according to the Preliminary Landscape Plan prepared by KLA Landscape Architecture.

Construction Off-road Equipment Mitigation - Construction equipment would be minimum EPA Tier 1 engines according to the applicant. The maximum speed for construction equipment will be 15 mph.

Mobile Land Use Mitigation - The project will provide a density of 21 units per acre compared to the surrounding single-family residential development (8 units per acre). The project will improve destination accessibility by locating new off-campus student housing within 0.5 miles of HSU. The project will improve the pedestrian network through the development of trails on the eastern edge and northern edge of the site.

Area Mitigation - Low VOC paints will be used for the proposed structures per the applicant.

Water Mitigation - Low flow plumbing fixtures will be installed in the proposed buildings to reduce resident water use. Water efficient irrigation systems will be used to reduce outdoor water use.

Waste Mitigation - Since the project proposes multi-family housing, the applicant is required to have recycling services. This is conservatively estimated to reduce waste disposal by 20 percent.

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00



tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstructionPhase	NumDays	300.00	280.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	7/12/2019	8/2/2019

tblConstructionPhase	PhaseEndDate	3/22/2019	4/5/2019
tblConstructionPhase	PhaseEndDate	2/16/2018	2/23/2018
tblConstructionPhase	PhaseEndDate	4/12/2019	5/10/2019
tblConstructionPhase	PhaseStartDate	5/11/2019	6/1/2019
tblConstructionPhase	PhaseStartDate	2/24/2018	3/10/2018
tblConstructionPhase	PhaseStartDate	1/20/2018	1/27/2018
tblConstructionPhase	PhaseStartDate	4/6/2019	5/4/2019
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	132.00	0.00
tblFireplaces	NumberNoFireplace	24.00	240.00
tblFireplaces	NumberWood	84.00	0.00
tblGrading	AcresOfGrading	50.00	11.00
tblLandUse	LandUseSquareFeet	160,000.00	120,000.00
tblLandUse	LandUseSquareFeet	0.00	15,000.00
tblLandUse	LotAcreage	6.32	11.00
tblLandUse	LotAcreage	3.60	0.00
tblLandUse	Population	686.00	800.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblSequestration	NumberOfNewTrees	0.00	200.00
tblVehicleTrips	ST_TR	7.16	7.14
tblVehicleTrips	SU_TR	6.07	6.05
tblVehicleTrips	WD_TR	6.59	6.57
tblWoodstoves	NumberCatalytic	12.00	0.00
tblWoodstoves	NumberNoncatalytic	12.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

## 2.0 Emissions Summary

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### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.3890	59.6789	43.4524	0.0636	6.7697	2.7894	9.5591	3.4168	2.5663	5.9831	0.0000	6,352.018 0	6,352.018 0	1.9435	0.0000	6,392.831 9
2019	176.9127	26.8380	40.1400	0.0592	2.2070	1.3656	3.5726	0.5916	1.2825	1.8741	0.0000	5,202.156 4	5,202.156 4	0.7362	0.0000	5,217.616 2
<b>Total</b>	<b>182.3018</b>	<b>86.5169</b>	<b>83.5923</b>	<b>0.1228</b>	<b>8.9767</b>	<b>4.1551</b>	<b>13.1317</b>	<b>4.0084</b>	<b>3.8488</b>	<b>7.8572</b>	<b>0.0000</b>	<b>11,554.17 44</b>	<b>11,554.17 44</b>	<b>2.6797</b>	<b>0.0000</b>	<b>11,610.44 81</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	7.4325	77.7684	88.1333	0.0636	3.1367	2.4944	5.6311	1.5615	2.4943	4.0558	0.0000	6,352.018 0	6,352.018 0	1.9435	0.0000	6,392.831 9
2019	177.2356	37.9874	57.0235	0.0592	2.2070	2.4073	4.6143	0.5916	2.4009	2.9926	0.0000	5,202.156 4	5,202.156 4	0.7362	0.0000	5,217.616 2
<b>Total</b>	<b>184.6681</b>	<b>115.7558</b>	<b>145.1568</b>	<b>0.1228</b>	<b>5.3437</b>	<b>4.9017</b>	<b>10.2454</b>	<b>2.1532</b>	<b>4.8952</b>	<b>7.0484</b>	<b>0.0000</b>	<b>11,554.17 44</b>	<b>11,554.17 44</b>	<b>2.6797</b>	<b>0.0000</b>	<b>11,610.44 81</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	-1.30	-33.80	-73.65	0.00	40.47	-17.97	21.98	46.28	-27.19	10.29	0.00	0.00	0.00	0.00	0.00	0.00

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Energy	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
Mobile	10.0184	26.0858	102.0351	0.1498	10.4653	0.2968	10.7621	2.8045	0.2734	3.0780		12,108.7960	12,108.7960	0.5785		12,120.9446
<b>Total</b>	<b>20.8626</b>	<b>26.5806</b>	<b>122.0870</b>	<b>0.1525</b>	<b>10.4653</b>	<b>0.4273</b>	<b>10.8926</b>	<b>2.8045</b>	<b>0.4040</b>	<b>3.2085</b>	<b>0.0000</b>	<b>12,481.4289</b>	<b>12,481.4289</b>	<b>0.6202</b>	<b>6.1800e-003</b>	<b>12,496.3676</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Energy	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
Mobile	9.9535	25.5873	100.8020	0.1465	10.2312	0.2906	10.5218	2.7418	0.2677	3.0095		11,845.8193	11,845.8193	0.5673		11,857.7323
<b>Total</b>	<b>20.7976</b>	<b>26.0820</b>	<b>120.8539</b>	<b>0.1492</b>	<b>10.2312</b>	<b>0.4211</b>	<b>10.6523</b>	<b>2.7418</b>	<b>0.3983</b>	<b>3.1401</b>	<b>0.0000</b>	<b>12,218.4521</b>	<b>12,218.4521</b>	<b>0.6090</b>	<b>6.1800e-003</b>	<b>12,233.1553</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	0.31	1.88	1.01	2.12	2.24	1.45	2.21	2.24	1.41	2.13	0.00	2.11	2.11	1.81	0.00	2.11

### 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	1/1/2018	1/19/2018	5	15	
2	Grading	Grading	1/27/2018	2/23/2018	5	20	
3	Building Construction	Building Construction	3/10/2018	4/5/2019	5	280	
4	Paving	Paving	5/4/2019	5/10/2019	5	5	
5	Architectural Coating	Architectural Coating	6/1/2019	8/2/2019	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 11

Acres of Paving: 0

Residential Indoor: 486,000; Residential Outdoor: 162,000; Non-Residential Indoor: 27,900; Non-Residential Outdoor: 9,300 (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
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	182.00	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	230.00	48.00	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	46.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

### 3.2 Demolition - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6249	0.0000	2.6249	0.3974	0.0000	0.3974			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.328 2	3,983.328 2	1.1015		4,006.458 5
<b>Total</b>	<b>3.5606</b>	<b>36.8310</b>	<b>31.7250</b>	<b>0.0399</b>	<b>2.6249</b>	<b>1.8090</b>	<b>4.4339</b>	<b>0.3974</b>	<b>1.6856</b>	<b>2.0830</b>		<b>3,983.328 2</b>	<b>3,983.328 2</b>	<b>1.1015</b>		<b>4,006.458 5</b>



### 3.2 Demolition - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3719	3.1890	4.9560	9.0800e-003	0.2112	0.0443	0.2556	0.0578	0.0408	0.0986		882.2248	882.2248	6.2900e-003		882.3570
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0746	0.1088	0.8592	1.3700e-003	0.1232	1.0600e-003	0.1243	0.0327	9.8000e-004	0.0337		104.4104	104.4104	7.0400e-003		104.5582
<b>Total</b>	<b>0.4465</b>	<b>3.2978</b>	<b>5.8152</b>	<b>0.0105</b>	<b>0.3345</b>	<b>0.0454</b>	<b>0.3798</b>	<b>0.0905</b>	<b>0.0418</b>	<b>0.1323</b>		<b>986.6353</b>	<b>986.6353</b>	<b>0.0133</b>		<b>986.9153</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1812	0.0000	1.1812	0.1789	0.0000	0.1789			0.0000			0.0000
Off-Road	5.2791	49.4583	54.4963	0.0399		1.8567	1.8567		1.8567	1.8567	0.0000	3,983.328 2	3,983.328 2	1.1015		4,006.458 5
<b>Total</b>	<b>5.2791</b>	<b>49.4583</b>	<b>54.4963</b>	<b>0.0399</b>	<b>1.1812</b>	<b>1.8567</b>	<b>3.0379</b>	<b>0.1789</b>	<b>1.8567</b>	<b>2.0356</b>	<b>0.0000</b>	<b>3,983.328 2</b>	<b>3,983.328 2</b>	<b>1.1015</b>		<b>4,006.458 5</b>

### 3.2 Demolition - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3719	3.1890	4.9560	9.0800e-003	0.2112	0.0443	0.2556	0.0578	0.0408	0.0986		882.2248	882.2248	6.2900e-003		882.3570
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0746	0.1088	0.8592	1.3700e-003	0.1232	1.0600e-003	0.1243	0.0327	9.8000e-004	0.0337		104.4104	104.4104	7.0400e-003		104.5582
<b>Total</b>	<b>0.4465</b>	<b>3.2978</b>	<b>5.8152</b>	<b>0.0105</b>	<b>0.3345</b>	<b>0.0454</b>	<b>0.3798</b>	<b>0.0905</b>	<b>0.0418</b>	<b>0.1323</b>		<b>986.6353</b>	<b>986.6353</b>	<b>0.0133</b>		<b>986.9153</b>

### 3.3 Grading - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6054	0.0000	6.6054	3.3732	0.0000	3.3732			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
<b>Total</b>	<b>5.2895</b>	<b>59.5338</b>	<b>42.3068</b>	<b>0.0617</b>	<b>6.6054</b>	<b>2.7880</b>	<b>9.3934</b>	<b>3.3732</b>	<b>2.5650</b>	<b>5.9382</b>		<b>6,212.8042</b>	<b>6,212.8042</b>	<b>1.9341</b>		<b>6,253.4209</b>

### 3.3 Grading - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0995	0.1451	1.1456	1.8300e-003	0.1643	1.4200e-003	0.1657	0.0436	1.3100e-003	0.0449		139.2139	139.2139	9.3900e-003			139.4110
<b>Total</b>	<b>0.0995</b>	<b>0.1451</b>	<b>1.1456</b>	<b>1.8300e-003</b>	<b>0.1643</b>	<b>1.4200e-003</b>	<b>0.1657</b>	<b>0.0436</b>	<b>1.3100e-003</b>	<b>0.0449</b>		<b>139.2139</b>	<b>139.2139</b>	<b>9.3900e-003</b>			<b>139.4110</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					2.9724	0.0000	2.9724	1.5179	0.0000	1.5179			0.0000			0.0000	
Off-Road	7.3251	77.6234	86.9877	0.0617		2.4930	2.4930		2.4930	2.4930	0.0000	6,212.8041	6,212.8041	1.9341			6,253.4209
<b>Total</b>	<b>7.3251</b>	<b>77.6234</b>	<b>86.9877</b>	<b>0.0617</b>	<b>2.9724</b>	<b>2.4930</b>	<b>5.4654</b>	<b>1.5179</b>	<b>2.4930</b>	<b>4.0109</b>	<b>0.0000</b>	<b>6,212.8041</b>	<b>6,212.8041</b>	<b>1.9341</b>			<b>6,253.4209</b>

### 3.3 Grading - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0995	0.1451	1.1456	1.8300e-003	0.1643	1.4200e-003	0.1657	0.0436	1.3100e-003	0.0449		139.2139	139.2139	9.3900e-003			139.4110
<b>Total</b>	<b>0.0995</b>	<b>0.1451</b>	<b>1.1456</b>	<b>1.8300e-003</b>	<b>0.1643</b>	<b>1.4200e-003</b>	<b>0.1657</b>	<b>0.0436</b>	<b>1.3100e-003</b>	<b>0.0449</b>		<b>139.2139</b>	<b>139.2139</b>	<b>9.3900e-003</b>			<b>139.4110</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387			2,623.3517
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.9390</b>	<b>2,609.9390</b>	<b>0.6387</b>			<b>2,623.3517</b>

### 3.4 Building Construction - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.8660	4.7109	11.4930	0.0114	0.3175	0.0703	0.3878	0.0904	0.0647	0.1551		1,095.164 4	1,095.164 4	9.2000e- 003			1,095.357 6
Worker	1.1443	1.6685	13.1741	0.0211	1.8894	0.0163	1.9057	0.5012	0.0151	0.5162		1,600.959 6	1,600.959 6	0.1079			1,603.226 2
<b>Total</b>	<b>2.0102</b>	<b>6.3794</b>	<b>24.6671</b>	<b>0.0325</b>	<b>2.2069</b>	<b>0.0866</b>	<b>2.2935</b>	<b>0.5916</b>	<b>0.0797</b>	<b>0.6713</b>		<b>2,696.123 9</b>	<b>2,696.123 9</b>	<b>0.1171</b>			<b>2,698.583 7</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,609.938 9	2,609.938 9	0.6387			2,623.351 7
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,609.938 9</b>	<b>2,609.938 9</b>	<b>0.6387</b>			<b>2,623.351 7</b>

### 3.4 Building Construction - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.8660	4.7109	11.4930	0.0114	0.3175	0.0703	0.3878	0.0904	0.0647	0.1551		1,095.164 4	1,095.164 4	9.2000e- 003			1,095.357 6
Worker	1.1443	1.6685	13.1741	0.0211	1.8894	0.0163	1.9057	0.5012	0.0151	0.5162		1,600.959 6	1,600.959 6	0.1079			1,603.226 2
<b>Total</b>	<b>2.0102</b>	<b>6.3794</b>	<b>24.6671</b>	<b>0.0325</b>	<b>2.2069</b>	<b>0.0866</b>	<b>2.2935</b>	<b>0.5916</b>	<b>0.0797</b>	<b>0.6713</b>		<b>2,696.123 9</b>	<b>2,696.123 9</b>	<b>0.1171</b>			<b>2,698.583 7</b>

### 3.4 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279			2,593.947 9
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>			<b>2,593.947 9</b>

### 3.4 Building Construction - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.8272	4.3654	11.1656	0.0114	0.3176	0.0649	0.3825	0.0905	0.0597	0.1501		1,077.7314	1,077.7314	8.9100e-003			1,077.9184
Worker	1.0365	1.5076	11.8541	0.0211	1.8894	0.0157	1.9051	0.5012	0.0146	0.5157		1,543.6633	1,543.6633	0.0994			1,545.7500
<b>Total</b>	<b>1.8637</b>	<b>5.8730</b>	<b>23.0196</b>	<b>0.0324</b>	<b>2.2070</b>	<b>0.0806</b>	<b>2.2876</b>	<b>0.5917</b>	<b>0.0742</b>	<b>0.6659</b>		<b>2,621.3946</b>	<b>2,621.3946</b>	<b>0.1083</b>			<b>2,623.6683</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	5.4223	32.1144	34.0039	0.0268		2.3267	2.3267		2.3267	2.3267	0.0000	2,580.7618	2,580.7618	0.6279			2,593.9479
<b>Total</b>	<b>5.4223</b>	<b>32.1144</b>	<b>34.0039</b>	<b>0.0268</b>		<b>2.3267</b>	<b>2.3267</b>		<b>2.3267</b>	<b>2.3267</b>	<b>0.0000</b>	<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>			<b>2,593.9479</b>

### 3.4 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.8272	4.3654	11.1656	0.0114	0.3176	0.0649	0.3825	0.0905	0.0597	0.1501		1,077.7314	1,077.7314	8.9100e-003			1,077.9184
Worker	1.0365	1.5076	11.8541	0.0211	1.8894	0.0157	1.9051	0.5012	0.0146	0.5157		1,543.6633	1,543.6633	0.0994			1,545.7500
<b>Total</b>	<b>1.8637</b>	<b>5.8730</b>	<b>23.0196</b>	<b>0.0324</b>	<b>2.2070</b>	<b>0.0806</b>	<b>2.2876</b>	<b>0.5917</b>	<b>0.0742</b>	<b>0.6659</b>		<b>2,621.3946</b>	<b>2,621.3946</b>	<b>0.1083</b>			<b>2,623.6683</b>

### 3.5 Paving - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>1.4259</b>	<b>14.9353</b>	<b>14.3652</b>	<b>0.0223</b>		<b>0.8094</b>	<b>0.8094</b>		<b>0.7447</b>	<b>0.7447</b>		<b>2,208.9731</b>	<b>2,208.9731</b>	<b>0.6989</b>			<b>2,223.6499</b>



### 3.5 Paving - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0676	0.0983	0.7731	1.3700e-003	0.1232	1.0300e-003	0.1243	0.0327	9.5000e-004	0.0336		100.6737	100.6737	6.4800e-003			100.8098
<b>Total</b>	<b>0.0676</b>	<b>0.0983</b>	<b>0.7731</b>	<b>1.3700e-003</b>	<b>0.1232</b>	<b>1.0300e-003</b>	<b>0.1243</b>	<b>0.0327</b>	<b>9.5000e-004</b>	<b>0.0336</b>		<b>100.6737</b>	<b>100.6737</b>	<b>6.4800e-003</b>			<b>100.8098</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	4.1483	29.9207	31.5677	0.0223		1.5517	1.5517		1.5517	1.5517	0.0000	2,208.9731	2,208.9731	0.6989			2,223.6499
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>4.1483</b>	<b>29.9207</b>	<b>31.5677</b>	<b>0.0223</b>		<b>1.5517</b>	<b>1.5517</b>		<b>1.5517</b>	<b>1.5517</b>	<b>0.0000</b>	<b>2,208.9731</b>	<b>2,208.9731</b>	<b>0.6989</b>			<b>2,223.6499</b>

### 3.5 Paving - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0676	0.0983	0.7731	1.3700e-003	0.1232	1.0300e-003	0.1243	0.0327	9.5000e-004	0.0336		100.6737	100.6737	6.4800e-003			100.8098
<b>Total</b>	<b>0.0676</b>	<b>0.0983</b>	<b>0.7731</b>	<b>1.3700e-003</b>	<b>0.1232</b>	<b>1.0300e-003</b>	<b>0.1243</b>	<b>0.0327</b>	<b>9.5000e-004</b>	<b>0.0336</b>		<b>100.6737</b>	<b>100.6737</b>	<b>6.4800e-003</b>			<b>100.8098</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	176.4390					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238			281.9473
<b>Total</b>	<b>176.7054</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>			<b>281.9473</b>

### 3.6 Architectural Coating - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.2073	0.3015	2.3708	4.2100e-003	0.3779	3.1500e-003	0.3810	0.1002	2.9100e-003	0.1031		308.7327	308.7327	0.0199			309.1500
<b>Total</b>	<b>0.2073</b>	<b>0.3015</b>	<b>2.3708</b>	<b>4.2100e-003</b>	<b>0.3779</b>	<b>3.1500e-003</b>	<b>0.3810</b>	<b>0.1002</b>	<b>2.9100e-003</b>	<b>0.1031</b>		<b>308.7327</b>	<b>308.7327</b>	<b>0.0199</b>			<b>309.1500</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	176.4390					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0238			281.9473
<b>Total</b>	<b>177.0283</b>	<b>3.2389</b>	<b>3.4172</b>	<b>2.9700e-003</b>		<b>0.2734</b>	<b>0.2734</b>		<b>0.2734</b>	<b>0.2734</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>			<b>281.9473</b>

### 3.6 Architectural Coating - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2073	0.3015	2.3708	4.2100e-003	0.3779	3.1500e-003	0.3810	0.1002	2.9100e-003	0.1031		308.7327	308.7327	0.0199		309.1500
<b>Total</b>	<b>0.2073</b>	<b>0.3015</b>	<b>2.3708</b>	<b>4.2100e-003</b>	<b>0.3779</b>	<b>3.1500e-003</b>	<b>0.3810</b>	<b>0.1002</b>	<b>2.9100e-003</b>	<b>0.1031</b>		<b>308.7327</b>	<b>308.7327</b>	<b>0.0199</b>		<b>309.1500</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.9535	25.5873	100.8020	0.1465	10.2312	0.2906	10.5218	2.7418	0.2677	3.0095		11,845.8193	11,845.8193	0.5673		11,857.7323
Unmitigated	10.0184	26.0858	102.0351	0.1498	10.4653	0.2968	10.7621	2.8045	0.2734	3.0780		12,108.7960	12,108.7960	0.5785		12,120.9446

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,576.80	1,713.60	1452.00	4,518,101	4,417,054
Parking Lot	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,576.80</b>	<b>1,713.60</b>	<b>1,452.00</b>	<b>4,518,101</b>	<b>4,417,054</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	42.30	19.60	38.10	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Recreational	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
0.423087	0.106890	0.174292	0.131313	0.085944	0.009008	0.014986	0.038396	0.002248	0.001583	0.007907	0.001288	0.003056

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
NaturalGas Unmitigated	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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
User Defined Recreational	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
Apartments Mid Rise	2863.59	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
<b>Total</b>		<b>0.0309</b>	<b>0.2639</b>	<b>0.1123</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>		<b>336.8927</b>	<b>336.8927</b>	<b>6.4600e-003</b>	<b>6.1800e-003</b>	<b>338.9430</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	lb/day										lb/day					
User Defined Recreational	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
Apartments Mid Rise	2.86359	0.0309	0.2639	0.1123	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8927	336.8927	6.4600e-003	6.1800e-003	338.9430
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
<b>Total</b>		<b>0.0309</b>	<b>0.2639</b>	<b>0.1123</b>	<b>1.6800e-003</b>		<b>0.0213</b>	<b>0.0213</b>		<b>0.0213</b>	<b>0.0213</b>		<b>336.8927</b>	<b>336.8927</b>	<b>6.4600e-003</b>	<b>6.1800e-003</b>	<b>338.9430</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801
Unmitigated	10.8133	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092	0.0000	35.7402	35.7402	0.0352	0.0000	36.4801

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0250					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	0.6130	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092		35.7402	35.7402	0.0352		36.4801
<b>Total</b>	<b>10.8133</b>	<b>0.2309</b>	<b>19.9396</b>	<b>1.0500e-003</b>		<b>0.1092</b>	<b>0.1092</b>		<b>0.1092</b>	<b>0.1092</b>	<b>0.0000</b>	<b>35.7402</b>	<b>35.7402</b>	<b>0.0352</b>	<b>0.0000</b>	<b>36.4801</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	lb/day										lb/day					
Architectural Coating	2.1753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0250					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	0.6130	0.2309	19.9396	1.0500e-003		0.1092	0.1092		0.1092	0.1092		35.7402	35.7402	0.0352		36.4801
<b>Total</b>	<b>10.8133</b>	<b>0.2309</b>	<b>19.9396</b>	<b>1.0500e-003</b>		<b>0.1092</b>	<b>0.1092</b>		<b>0.1092</b>	<b>0.1092</b>	<b>0.0000</b>	<b>35.7402</b>	<b>35.7402</b>	<b>0.0352</b>	<b>0.0000</b>	<b>36.4801</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 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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## The Village Student Housing Project Humboldt County, Mitigation Report

### Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	-0.67	-0.39	0.00	-1.09	-1.09	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	-0.65	-0.33	-0.43	0.00	-0.58	-0.68	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	-0.43	-0.32	-0.62	0.00	-0.03	-0.10	0.00	0.00	0.00	0.00	0.00	0.00
Grading	-0.38	-0.30	-1.03	0.00	0.11	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Paving	-1.83	-1.00	-1.14	0.00	-0.92	-1.09	0.00	0.00	0.00	0.00	0.00	0.00

### OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 1	1	1	No Change	0.00
Excavators	Diesel	Tier 1	5	5	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 1	1	1	No Change	0.00
Cranes	Diesel	Tier 1	1	1	No Change	0.00
Forklifts	Diesel	Tier 1	3	3	No Change	0.00
Graders	Diesel	Tier 1	1	1	No Change	0.00
Pavers	Diesel	Tier 1	2	2	No Change	0.00
Rollers	Diesel	Tier 1	2	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 1	3	3	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 1	5	5	No Change	0.00
Generator Sets	Diesel	Tier 1	1	1	No Change	0.00
Paving Equipment	Diesel	Tier 1	2	2	No Change	0.00
Scrapers	Diesel	Tier 1	2	2	No Change	0.00
Welders	Diesel	Tier 1	1	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors	5.99000E-003	4.13000E-002	4.14300E-002	7.00000E-005	2.90000E-003	2.90000E-003	0.00000E+000	5.74482E+000	5.74482E+000	4.90000E-004	0.00000E+000	5.75501E+000
Concrete/Industrial Saws	3.90000E-003	2.93600E-002	2.79300E-002	5.00000E-005	2.00000E-003	2.00000E-003	0.00000E+000	4.03242E+000	4.03242E+000	3.10000E-004	0.00000E+000	4.03898E+000
Cranes	6.64300E-002	7.93430E-001	2.95480E-001	6.90000E-004	3.41800E-002	3.14500E-002	0.00000E+000	6.28738E+001	6.28738E+001	1.96500E-002	0.00000E+000	6.32865E+001
Excavators	1.26000E-002	1.34910E-001	1.42740E-001	2.30000E-004	6.54000E-003	6.02000E-003	0.00000E+000	2.05399E+001	2.05399E+001	6.39000E-003	0.00000E+000	2.06742E+001
Forklifts	7.29400E-002	6.46160E-001	5.06950E-001	6.40000E-004	5.12200E-002	4.71200E-002	0.00000E+000	5.83641E+001	5.83641E+001	1.82400E-002	0.00000E+000	5.87472E+001
Generator Sets	6.86400E-002	5.64300E-001	5.23780E-001	9.20000E-004	3.54300E-002	3.54300E-002	0.00000E+000	7.91290E+001	7.91290E+001	5.54000E-003	0.00000E+000	7.92453E+001
Graders	8.32000E-003	8.31000E-002	4.66700E-002	6.00000E-005	4.67000E-003	4.30000E-003	0.00000E+000	5.67726E+000	5.67726E+000	1.77000E-003	0.00000E+000	5.71437E+000
Pavers	1.38000E-003	1.50200E-002	1.39500E-002	2.00000E-005	7.40000E-004	6.80000E-004	0.00000E+000	2.03025E+000	2.03025E+000	6.40000E-004	0.00000E+000	2.04374E+000
Paving Equipment	1.05000E-003	1.11100E-002	1.24300E-002	2.00000E-005	5.50000E-004	5.10000E-004	0.00000E+000	1.80171E+000	1.80171E+000	5.70000E-004	0.00000E+000	1.81368E+000
Rollers	1.13000E-003	1.12000E-002	9.54000E-003	1.00000E-005	7.40000E-004	6.80000E-004	0.00000E+000	1.17791E+000	1.17791E+000	3.70000E-004	0.00000E+000	1.18573E+000
Rubber Tired Dozers	2.69000E-002	2.92420E-001	2.24060E-001	2.20000E-004	1.35000E-002	1.24200E-002	0.00000E+000	2.03260E+001	2.03260E+001	6.33000E-003	0.00000E+000	2.04589E+001
Scrapers	2.25600E-002	2.79190E-001	1.72860E-001	3.00000E-004	1.10000E-002	1.01200E-002	0.00000E+000	2.72132E+001	2.72132E+001	8.47000E-003	0.00000E+000	2.73911E+001
Tractors/Loaders/Backhoes	1.00100E-001	9.92540E-001	9.02400E-001	1.20000E-003	6.94500E-002	6.38900E-002	0.00000E+000	1.09521E+002	1.09521E+002	3.42200E-002	0.00000E+000	1.10240E+002
Welders	5.98900E-002	2.33480E-001	2.58470E-001	3.60000E-004	1.54200E-002	1.54200E-002	0.00000E+000	2.63509E+001	2.63509E+001	4.89000E-003	0.00000E+000	2.64537E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	1.32600E-002	7.28800E-002	7.68900E-002	7.00000E-005	6.15000E-003	6.15000E-003	0.00000E+000	5.74481E+000	5.74481E+000	4.90000E-004	0.00000E+000	5.75500E+000
Concrete/Industrial Saws	9.31000E-003	5.11500E-002	5.39700E-002	5.00000E-005	4.32000E-003	4.32000E-003	0.00000E+000	4.03242E+000	4.03242E+000	3.10000E-004	0.00000E+000	4.03897E+000
Cranes	5.38100E-002	8.39690E-001	9.77050E-001	6.90000E-004	1.52900E-002	1.52900E-002	0.00000E+000	6.28738E+001	6.28738E+001	1.96500E-002	0.00000E+000	6.32864E+001
Excavators	3.78400E-002	3.01780E-001	3.18390E-001	2.30000E-004	1.26400E-002	1.26400E-002	0.00000E+000	2.05399E+001	2.05399E+001	6.39000E-003	0.00000E+000	2.06742E+001
Forklifts	1.56910E-001	8.62320E-001	9.09790E-001	6.40000E-004	7.27800E-002	7.27800E-002	0.00000E+000	5.83641E+001	5.83641E+001	1.82400E-002	0.00000E+000	5.87471E+001
Generator Sets	1.82650E-001	1.00378E+000	1.05904E+000	9.20000E-004	8.47200E-002	8.47200E-002	0.00000E+000	7.91290E+001	7.91290E+001	5.54000E-003	0.00000E+000	7.92452E+001
Graders	1.03200E-002	8.22900E-002	8.68200E-002	6.00000E-005	3.45000E-003	3.45000E-003	0.00000E+000	5.67725E+000	5.67725E+000	1.77000E-003	0.00000E+000	5.71437E+000
Pavers	3.80000E-003	3.02800E-002	3.19400E-002	2.00000E-005	1.27000E-003	1.27000E-003	0.00000E+000	2.03025E+000	2.03025E+000	6.40000E-004	0.00000E+000	2.04374E+000
Paving Equipment	3.38000E-003	2.69900E-002	2.84800E-002	2.00000E-005	1.13000E-003	1.13000E-003	0.00000E+000	1.80170E+000	1.80170E+000	5.70000E-004	0.00000E+000	1.81368E+000
Rollers	3.19000E-003	1.75300E-002	1.85000E-002	1.00000E-005	1.48000E-003	1.48000E-003	0.00000E+000	1.17790E+000	1.17790E+000	3.70000E-004	0.00000E+000	1.18573E+000
Rubber Tired Dozers	1.70900E-002	2.66700E-001	3.10320E-001	2.20000E-004	4.86000E-003	4.86000E-003	0.00000E+000	2.03260E+001	2.03260E+001	6.33000E-003	0.00000E+000	2.04589E+001
Scrapers	2.32300E-002	3.62460E-001	4.21750E-001	3.00000E-004	6.60000E-003	6.60000E-003	0.00000E+000	2.72132E+001	2.72132E+001	8.47000E-003	0.00000E+000	2.73911E+001
Tractors/Loaders/Balckhoes	2.91890E-001	1.60416E+000	1.69246E+000	1.20000E-003	1.35400E-001	1.35400E-001	0.00000E+000	1.09521E+002	1.09521E+002	3.42200E-002	0.00000E+000	1.10240E+002
Welders	8.89300E-002	2.68850E-001	2.09560E-001	3.60000E-004	2.45300E-002	2.45300E-002	0.00000E+000	2.63509E+001	2.63509E+001	4.89000E-003	0.00000E+000	2.64536E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	-1.21369E+000	-7.64649E-001	-8.55902E-001	0.00000E+000	-1.12069E+000	-1.12069E+000	0.00000E+000	1.74070E-006	1.74070E-006	0.00000E+000	0.00000E+000	1.73762E-006
Concrete/Industrial Saws	-1.38718E+000	-7.42166E-001	-9.32331E-001	0.00000E+000	-1.16000E+000	-1.16000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.47587E-006
Cranes	1.89974E-001	-5.83038E-002	-2.30665E+000	0.00000E+000	5.52662E-001	5.13831E-001	0.00000E+000	1.11334E-006	1.11334E-006	0.00000E+000	0.00000E+000	1.26409E-006
Excavators	-2.00317E+000	-1.23690E+000	-1.23056E+000	0.00000E+000	-9.32722E-001	-1.09967E+000	0.00000E+000	9.73713E-007	9.73713E-007	0.00000E+000	0.00000E+000	1.45108E-006
Forklifts	-1.15122E+000	-3.34530E-001	-7.94635E-001	0.00000E+000	-4.20929E-001	-5.44567E-001	0.00000E+000	1.19937E-006	1.19937E-006	0.00000E+000	0.00000E+000	1.19155E-006
Generator Sets	-1.66098E+000	-7.78806E-001	-1.02192E+000	0.00000E+000	-1.39119E+000	-1.39119E+000	0.00000E+000	1.13738E-006	1.13738E-006	0.00000E+000	0.00000E+000	1.13571E-006
Graders	-2.40385E-001	9.74729E-003	-8.60296E-001	0.00000E+000	2.61242E-001	1.97674E-001	0.00000E+000	1.76141E-006	1.76141E-006	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	-1.75362E+000	-1.01598E+000	-1.28961E+000	0.00000E+000	-7.16216E-001	-8.67647E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	-2.21905E+000	-1.42934E+000	-1.29123E+000	0.00000E+000	-1.05455E+000	-1.21569E+000	0.00000E+000	5.55028E-006	5.55028E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	-1.82301E+000	-5.65179E-001	-9.39203E-001	0.00000E+000	-1.00000E+000	-1.17647E+000	0.00000E+000	8.48961E-006	8.48961E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	3.64684E-001	8.79557E-002	-3.84986E-001	0.00000E+000	6.40000E-001	6.08696E-001	0.00000E+000	1.47594E-006	1.47594E-006	0.00000E+000	0.00000E+000	9.77571E-007
Scrapers	-2.96986E-002	-2.98256E-001	-1.43984E+000	0.00000E+000	4.00000E-001	3.47826E-001	0.00000E+000	1.10241E-006	1.10241E-006	0.00000E+000	0.00000E+000	1.46033E-006
Tractors/Loaders/Balkhoes	-1.91598E+000	-6.16217E-001	-8.75510E-001	0.00000E+000	-9.49604E-001	-1.11927E+000	0.00000E+000	1.18698E-006	1.18698E-006	0.00000E+000	0.00000E+000	1.17924E-006
Welders	-4.84889E-001	-1.51490E-001	1.89229E-001	0.00000E+000	-5.90791E-001	-5.90791E-001	0.00000E+000	1.13848E-006	1.13848E-006	0.00000E+000	0.00000E+000	1.51208E-006

**Fugitive Dust Mitigation**

Yes/No Mitigation Measure Mitigation Input Mitigation Input Mitigation Input

No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00	
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day) 2.00

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.29	0.08	0.29	0.08	0.00	0.00
Demolition	Fugitive Dust	0.02	0.00	0.01	0.00	0.55	0.55
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.07	0.03	0.03	0.02	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Percent Reduction Summary**



Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.70	1.90	1.32	2.19	2.10	2.08	0.00	2.17	2.17	1.95	0.00	2.17
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	15.97	16.48	20.00	20.06	17.43
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Mobile Mitigation**

Project Setting: Urban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
Yes	Land Use	Increase Density	0.05	13.00	0.00	
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00	0.00		
Yes	Land Use	Improve Destination Accessibility	0.19	0.50		
No	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.00		
No	Neighborhood Enhancements	Implement NEV Network	0.01		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02		
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00	
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00	
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00	
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00	0.00	
No	Transit Improvements	Expand Transit Network	0.00	0.00	
No	Transit Improvements	Increase Transit Frequency	0.00		0.00
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.02		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	7.70		
No	Commute	Workplace Parking Charge		0.00	
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	15.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.02		

**Area Mitigation**

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

**Energy Mitigation Measures**

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

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

### Water Mitigation Measures

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

### Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	20.00