APPENDIX A

AIR QUALITY AND GREENHOUSE GAS EMISSIONS CALCULATIONS

Harbor Walk - Existing

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	20	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2013

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - No Construction

Vehicle Trips - Trip Generation based on Traffic Study (LLG 2013)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10	0
tblProjectCharacteristics	OperationalYear	2014	2013
tblVehicleTrips	ST_TR	62	32.3
tblVehicleTrips	SU_TR	62	32.3
tblVehicleTrips	WD_TR	62	32.3

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Area	0.5232	2.00E-05	2.16E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05		4.38E-03	4.38E-03	1.00E-05		4.66E-03
Energy	0.0128	0.1163	0.0977	7.00E-04		8.84E-03	8.84E-03		8.84E-03	8.84E-03		139.5004	139.5004	2.67E-03	2.56E-03	140.3494
Mobile	4.5361	3.3887	17.4951	0.0252	1.827	0.0526	1.8796	0.4873	0.0483	0.5356		2,361.86	2,361.86	0.1265		2,364.51
Total	**5.0721**	**3.505**	**17.5949**	**0.0259**	**1.827**	**0.0615**	**1.8885**	**0.4873**	**0.0571**	**0.5445**		**2,501.36**	**2,501.36**	**0.1291**	**2.56E-03**	**2,504.87**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Unmitigated	4.5361	3.3887	17.4951	0.0252	1.827	0.0526	1.8796	0.4873	0.0483	0.5356		2,361.86	2,361.86	0.1265		2,364.51
Mitigated	4.5361	3.3887	17.4951	0.0252	1.827	0.0526	1.8796	0.4873	0.0483	0.5356		2,361.86	2,361.86	0.1265		2,364.51

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	646.00	646.00	646.00	865,350	865,350
Total	646.00	646.00	646.00	865,350	865,350

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512383	0.057481	0.191072	0.155009	0.040497	0.005877	0.014205	0.012561	0.001412	0.002127	0.004643	0.000518	0.002213

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0128	0.1163	0.0977	7.00E-04		8.84E-03	8.84E-03		8.84E-03	8.84E-03		139.5004	139.5004	2.67E-03	2.56E-03	140.3494
NaturalGas Unmitigated	0.0128	0.1163	0.0977	7.00E-04		8.84E-03	8.84E-03		8.84E-03	8.84E-03		139.5004	139.5004	2.67E-03	2.56E-03	140.3494

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					
Automobile Care Center	1.18575	0.0128	0.1163	0.0977	7.00E-04		8.84E-03	8.84E-03		8.84E-03	8.84E-03		139.5004	139.5004	2.67E-03	2.56E-03	140.3494
Total		**0.0128**	**0.1163**	**0.0977**	**7.00E-04**		**8.84E-03**	**8.84E-03**		**8.84E-03**	**8.84E-03**		**139.5004**	**139.5004**	**2.67E-03**	**2.56E-03**	**140.3494**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	0.5232	2.00E-05	2.16E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05		4.38E-03	4.38E-03	1.00E-05		4.66E-03
Mitigated	0.5232	2.00E-05	2.16E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05		4.38E-03	4.38E-03	1.00E-05		4.66E-03

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.127					0	0		0	0			0			0
Consumer Products	0.396					0	0		0	0			0			0
Landscaping	2.20E-04	2.00E-05	2.16E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05		4.38E-03	4.38E-03	1.00E-05		4.66E-03
Total	**0.5232**	**2.00E-05**	**2.16E-03**	**0**		**1.00E-05**	**1.00E-05**		**1.00E-05**	**1.00E-05**		**4.38E-03**	**4.38E-03**	**1.00E-05**		**4.66E-03**

Harbor Walk Apartment Homes

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	150	Dwelling Unit	2.42	150,000.00	429

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Off-road Equipment - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Grading - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Demolition - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Trips and VMT - Based on CalEEMod Defaults

Vehicle Trips - Based on Traffic Study (LLG 2013)

Woodstoves - No Hearth

Operational Off-Road Equipment - Emergency Generator for Sump Pump

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10	65
tblConstructionPhase	NumDays	220	304

tblConstructionPhase	NumDays	6	20
tblConstructionPhase	NumDays	10	2
tblConstructionPhase	PhaseEndDate	3/31/2016	1/29/2016
tblConstructionPhase	PhaseEndDate	2/2/2016	1/5/2016
tblConstructionPhase	PhaseEndDate	10/24/2014	10/31/2014
tblConstructionPhase	PhaseStartDate	1/1/2016	11/2/2015
tblConstructionPhase	PhaseStartDate	11/1/2014	11/3/2014
tblConstructionPhase	PhaseStartDate	8/30/2014	9/1/2014
tblConstructionPhase	PhaseStartDate	1/30/2016	1/4/2016
tblConstructionPhase	PhaseStartDate	9/27/2014	10/6/2014
tblFireplaces	FireplaceWoodMass	1,019.20	0
tblFireplaces	NumberGas	127.5	0
tblFireplaces	NumberNoFireplace	15	150
tblFireplaces	NumberWood	7.5	0
tblGrading	AcresOfGrading	10	2.76
tblGrading	MaterialExported	0	15,850.00
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Underground Infrastructure/Utilities
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Underground Infrastructure/Utilities
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOperationalOffRoadEquipment	OperDaysPerYear	260	4
tblOperationalOffRoadEquipment	OperHoursPerDay	8	1
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0	1
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0	59
tblTripsAndVMT	HaulingTripNumber	0	350
tblVehicleTrips	ST_TR	7.16	6.65
tblVehicleTrips	SU_TR	6.07	6.65
tblVehicleTrips	WD_TR	6.59	6.65
tblWoodstoves	NumberCatalytic	7.5	0
tblWoodstoves	NumberNoncatalytic	7.5	0
tblWoodstoves	WoodstoveWoodMass	999.6	0

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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					
2014	9.7645	54.118	53.8303	0.1077	4.2773	2.5822	6.8595	1.8043	2.3755	4.1798	0	11,160.83	11,160.83	1.1163	0	11,184.27
2015	24.1554	24.3979	23.7781	0.0439	1.5531	1.6195	3.1725	0.4138	1.5075	1.9214	0	4,257.24	4,257.24	0.7655	0	4,273.31
2016	20.9902	20.466	15.9276	0.0253	0.4136	1.3235	1.737	0.1097	1.2345	1.3442	0	2,481.98	2,481.98	0.5868	0	2,494.31
Total	**54.9101**	**98.9818**	**93.536**	**0.1769**	**31.1255**	**5.5251**	**36.6506**	**8.4352**	**5.1175**	**13.5526**	**0**	**17,900.05**	**17,900.05**	**2.4686**	**0**	**17,951.89**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6866	0.1468	12.5476	6.50E-04		0.0677	0.0677		0.0677	0.0677	0	22.2829	22.2829	0.0227	0	22.7597
Energy	0.0382	0.3262	0.1388	2.08E-03		0.0264	0.0264		0.0264	0.0264		416.4609	416.4609	7.98E-03	7.64E-03	418.9954
Mobile	13.2786	9.3649	42.0814	0.0955	7.1993	0.1258	7.3251	1.9206	0.1157	2.0363		8,558.17	8,558.17	0.3679		8,565.90
Offroad	0.0799	0.6043	0.4754	8.20E-04		0.0424	0.0424		0.0424	0.0424		77.8793	77.8793	7.13E-03		78.029
Total	**17.0833**	**10.4422**	**55.2433**	**0.099**	**7.1993**	**0.2623**	**7.4616**	**1.9206**	**0.2521**	**2.1727**	**0**	**9,074.79**	**9,074.79**	**0.4057**	**7.64E-03**	**9,085.68**

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	8/4/2014	8/29/2014	5	20	
2	Grading	Grading	9/1/2014	9/26/2014	5	20	
3	Underground Infrastructure/Utilities	Trenching	10/6/2014	10/31/2014	5	20	
4	Building Construction	Building Construction	11/3/2014	12/31/2015	5	304	
5	Architectural Coating	Architectural Coating	11/2/2015	1/29/2016	5	65	
6	Paving	Paving	1/4/2016	1/5/2016	5	2	

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Cement and Mortar Mixers	1	8	9	0.56
Grading	Scrapers	1	6	361	0.48
Building Construction	Cranes	1	8	226	0.29
Demolition	Excavators	1	6	162	0.38
Paving	Pavers	1	8	125	0.42
Paving	Rollers	2	8	80	0.38
Demolition	Rubber Tired Dozers	1	8	255	0.4
Grading	Rubber Tired Dozers	1	8	255	0.4
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37
Demolition	Off-Highway Trucks	1	4	400	0.38
Underground Infrastructure/Utilities	Tractors/Loaders/Backhoes	1	6	97	0.37
Paving	Paving Equipment	1	8	130	0.36
Grading	Excavators	1	6	162	0.38
Grading	Off-Highway Trucks	1	4	400	0.38

Underground Infrastructure/Utilities	Excavators		1	8	162	0.38
Building Construction	Skid Steer Loaders		1	6	64	0.37
Building Construction	Graders		1	6	174	0.41
Building Construction	Off-Highway Trucks		1	4	400	0.38

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	5	13	0	350	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Underground Infrastructure/Utilities				0			20	LD_Mix	HDT_Mix	HHDT
Grading	4	10	0	1,981.00	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Building Construction	8	108	16	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Paving	6	15	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2014

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					1.4605	0	1.4605	0.2211	0	0.2211			0			0
Off-Road	2.4835	18.0125	18.8457	0.0225		1.3792	1.3792		1.2689	1.2689	0	2,392.09	2,392.09	0.7069		2,406.94
Total	**2.4835**	**18.0125**	**18.8457**	**0.0225**	**1.4605**	**1.3792**	**2.8397**	**0.2211**	**1.2689**	**1.49**	**0**	**2,392.09**	**2,392.09**	**0.7069**		**2,406.94**

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	1.0576	6.4463	4.5454	0.0129	0.3048	0.1168	0.4216	0.0834	0.1074	0.1909		1,326.83	1,326.83	0.0115		1,327.07
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.3182	0.0788	0.8232	1.67E-03	0.1453	1.13E-03	0.1464	0.0385	1.03E-03	0.0396		150.0935	150.0935	8.22E-03		150.2661
Total	**1.3758**	**6.5251**	**5.3686**	**0.0146**	**0.4501**	**0.1179**	**0.568**	**0.122**	**0.1085**	**0.2304**		**1,476.93**	**1,476.93**	**0.0197**		**1,477.34**

3.3 Grading - 2014

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					2.4406	0	2.4406	1.3024	0	1.3024			0			0
Off-Road	3.5338	17.5714	27.4701	0.0333		1.9203	1.9203		1.7667	1.7667	0	3,535.50	3,535.50	1.0448		3,557.44
Total	**3.5338**	**17.5714**	**27.4701**	**0.0333**	**2.4406**	**1.9203**	**4.3609**	**1.3024**	**1.7667**	**3.0691**	**0**	**3,535.50**	**3,535.50**	**1.0448**		**3,557.44**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	5.9859	36.486	25.727	0.0731	1.7249	0.661	2.386	0.4723	0.608	1.0803		7,509.87	7,509.87	0.0652		7,511.24
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.2448	0.0606	0.6332	1.29E-03	0.1118	8.70E-04	0.1126	0.0296	7.90E-04	0.0304		115.4565	115.4565	6.32E-03		115.5893
Total	**6.2307**	**36.5466**	**26.3602**	**0.0744**	**1.8367**	**0.6619**	**2.4986**	**0.5019**	**0.6088**	**1.1107**		**7,625.32**	**7,625.32**	**0.0716**		**7,626.83**

3.4 Underground Infrastructure/Utilities - 2014

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Off-Road	0.6992	2.647	5.237	7.63E-03		0.4562	0.4562		0.4197	0.4197	0	808.7785	808.7785	0.239		813.7975
Total	**0.6992**	**2.647**	**5.237**	**7.63E-03**		**0.4562**	**0.4562**		**0.4197**	**0.4197**	**0**	**808.7785**	**808.7785**	**0.239**		**813.7975**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0	0	0	0	0	0	0	0	0	0		0	0	0		0

Total	0	0	0	0	0	0	0	0	0	0		0	0	0		0

3.5 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4597	19.9289	12.5123	0.0208		1.3983	1.3983		1.2864	1.2864	0	2,203.17	2,203.17	0.6511		2,216.84
Total	**2.4597**	**19.9289**	**12.5123**	**0.0208**		**1.3983**	**1.3983**		**1.2864**	**1.2864**	**0**	**2,203.17**	**2,203.17**	**0.6511**		**2,216.84**

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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.3566	1.8431	2.2423	3.45E-03	0.1	0.0348	0.1347	0.0285	0.032	0.0604		352.5555	352.5555	3.21E-03		352.6228
Worker	2.6437	0.6546	6.8386	0.0139	1.2072	9.36E-03	1.2165	0.3202	8.58E-03	0.3287		1,246.93	1,246.93	0.0683		1,248.36
Total	**3.0002**	**2.4977**	**9.0809**	**0.0174**	**1.3071**	**0.0441**	**1.3513**	**0.3486**	**0.0406**	**0.3892**		**1,599.49**	**1,599.49**	**0.0715**		**1,600.99**

3.5 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4142	19.517	12.3858	0.0208		1.3615	1.3615		1.2526	1.2526	0	2,180.46	2,180.46	0.651		2,194.13
Total	**2.4142**	**19.517**	**12.3858**	**0.0208**		**1.3615**	**1.3615**		**1.2526**	**1.2526**	**0**	**2,180.46**	**2,180.46**	**0.651**		**2,194.13**

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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.3138	1.6044	2.0803	3.44E-03	0.1	0.0267	0.1267	0.0285	0.0246	0.053		347.8661	347.8661	2.80E-03		347.9249
Worker	2.4686	0.5886	6.1576	0.0139	1.2072	8.77E-03	1.216	0.3202	8.06E-03	0.3282		1,202.73	1,202.73	0.0624		1,204.04
Total	**2.7824**	**2.193**	**8.2379**	**0.0173**	**1.3072**	**0.0355**	**1.3426**	**0.3486**	**0.0326**	**0.3812**		**1,550.59**	**1,550.59**	**0.0652**		**1,551.96**

3.6 Architectural Coating - 2015

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	18.0498					0	0		0	0			0			0
Off-Road	0.4062	2.568	1.9	2.97E-03		0.2207	0.2207		0.2207	0.2207	0	281.1898	281.1898	0.0366		281.9587

Total	**18.456**	**2.568**	**1.9**	**2.97E-03**		**0.2207**	**0.2207**		**0.2207**	**0.2207**	**0**	**281.1898**	**281.1898**	**0.0366**		**281.9587**

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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.5029	0.1199	1.2543	2.83E-03	0.2459	1.79E-03	0.2477	0.0652	1.64E-03	0.0669		245	245	0.0127		245.2669
Total	**0.5029**	**0.1199**	**1.2543**	**2.83E-03**	**0.2459**	**1.79E-03**	**0.2477**	**0.0652**	**1.64E-03**	**0.0669**		**245**	**245**	**0.0127**		**245.2669**

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.0498					0	0		0	0			0			0
Off-Road	0.3681	2.3701	1.8822	2.97E-03		0.1964	0.1964		0.1964	0.1964	0	281.1898	281.1898	0.0332		281.886
Total	**18.4179**	**2.3701**	**1.8822**	**2.97E-03**		**0.1964**	**0.1964**		**0.1964**	**0.1964**	**0**	**281.1898**	**281.1898**	**0.0332**		**281.886**

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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.4714	0.1085	1.1376	2.83E-03	0.2459	1.72E-03	0.2476	0.0652	1.58E-03	0.0668		236.4049	236.4049	0.0117		236.6514
Total	**0.4714**	**0.1085**	**1.1376**	**2.83E-03**	**0.2459**	**1.72E-03**	**0.2476**	**0.0652**	**1.58E-03**	**0.0668**		**236.4049**	**236.4049**	**0.0117**		**236.6514**

3.7 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7795	17.9135	12.1322	0.0176		1.1241	1.1241		1.0354	1.0354	0	1,803.20	1,803.20	0.5339		1,814.42
Paving	0					0	0		0	0			0			0
Total	**1.7795**	**17.9135**	**12.1322**	**0.0176**		**1.1241**	**1.1241**		**1.0354**	**1.0354**	**0**	**1,803.20**	**1,803.20**	**0.5339**		**1,814.42**

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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0

Worker	0.3214	0.0739	0.7757	1.93E-03	0.1677	1.17E-03	0.1688	0.0445	1.08E-03	0.0455		161.1852	161.1852	8.00E-03		161.3532
Total	**0.3214**	**0.0739**	**0.7757**	**1.93E-03**	**0.1677**	**1.17E-03**	**0.1688**	**0.0445**	**1.08E-03**	**0.0455**		**161.1852**	**161.1852**	**8.00E-03**		**161.3532**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.2786	9.3649	42.0814	0.0955	7.1993	0.1258	7.3251	1.9206	0.1157	2.0363		8,558.17	8,558.17	0.3679		8,565.90
Unmitigated	13.2786	9.3649	42.0814	0.0955	7.1993	0.1258	7.3251	1.9206	0.1157	2.0363		8,558.17	8,558.17	0.3679		8,565.90

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	997.50	997.50	997.50	3,408,609	3,408,609
Total	997.50	997.50	997.50	3,408,609	3,408,609

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511437	0.057382	0.191336	0.153047	0.041226	0.005877	0.014979	0.013726	0.001416	0.002136	0.004703	0.00051	0.002224

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0382	0.3262	0.1388	2.08E-03		0.0264	0.0264		0.0264	0.0264		416.4609	416.4609	7.98E-03	7.64E-03	418.9954
NaturalGas Unmitigated	0.0382	0.3262	0.1388	2.08E-03		0.0264	0.0264		0.0264	0.0264		416.4609	416.4609	7.98E-03	7.64E-03	418.9954

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					
Apartments High Rise	3.53992	0.0382	0.3262	0.1388	2.08E-03		0.0264	0.0264		0.0264	0.0264		416.4609	416.4609	7.98E-03	7.64E-03	418.9954
Total		**0.0382**	**0.3262**	**0.1388**	**2.08E-03**		**0.0264**	**0.0264**		**0.0264**	**0.0264**		**416.4609**	**416.4609**	**7.98E-03**	**7.64E-03**	**418.9954**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6866	0.1468	12.5476	6.50E-04		0.0677	0.0677		0.0677	0.0677	0	22.2829	22.2829	0.0227	0	22.7597
Unmitigated	3.6866	0.1468	12.5476	6.50E-04		0.0677	0.0677		0.0677	0.0677	0	22.2829	22.2829	0.0227	0	22.7597

6.2 Area by SubCategory

<u>Mitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3214					0	0		0	0			0			0
Consumer Products	2.97					0	0		0	0			0			0
Hearth	0	0	0	0		0	0		0	0	0	0	0	0	0	0
Landscaping	0.3952	0.1468	12.5476	6.50E-04		0.0677	0.0677		0.0677	0.0677		22.2829	22.2829	0.0227		22.7597
Total	**3.6866**	**0.1468**	**12.5476**	**6.50E-04**		**0.0677**	**0.0677**		**0.0677**	**0.0677**	**0**	**22.2829**	**22.2829**	**0.0227**	**0**	**22.7597**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	1	4	84	0.74	Diesel

<u>UnMitigated/Mitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Equipment Type	lb/day										lb/day					
Generator Sets	0.0799	0.6043	0.4754	8.20E-04		0.0424	0.0424		0.0424	0.0424		77.8793	77.8793	7.13E-03		78.029
Total	**0.0799**	**0.6043**	**0.4754**	**8.20E-04**		**0.0424**	**0.0424**		**0.0424**	**0.0424**		**77.8793**	**77.8793**	**7.13E-03**		**78.029**

Harbor Walk - Existing

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	20	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 30

Climate Zone 8 **Operational Year** 2013

Utility Company Southern California Edison

CO2 Intensity (lb/MWhr) 630.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - No Construction

Vehicle Trips - Trip Generation based on Traffic Study (LLG 2013)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10	0
tblProjectCharacteristics	OperationalYear	2014	2013
tblVehicleTrips	ST_TR	62	32.3
tblVehicleTrips	SU_TR	62	32.3
tblVehicleTrips	WD_TR	62	32.3

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0955	0	2.70E-04	0		0	0		0	0	0	5.00E-04	5.00E-04	0	0	5.30E-04
Energy	2.33E-03	0.0212	0.0178	1.30E-04		1.61E-03	1.61E-03		1.61E-03	1.61E-03	0	75.9795	75.9795	2.87E-03	9.30E-04	76.327
Mobile	0.7441	0.6272	3.1652	4.63E-03	0.3266	9.48E-03	0.3361	0.0873	8.70E-03	0.096	0	394.5176	394.5176	0.0208	0	394.9554
Waste						0	0		0	0	15.5085	0	15.5085	0.9165	0	34.7556
Water						0	0		0	0	0.597	10.6778	11.2748	0.0618	1.55E-03	13.052
Total	**0.8419**	**0.6484**	**3.1833**	**4.76E-03**	**0.3266**	**0.0111**	**0.3377**	**0.0873**	**0.0103**	**0.0976**	**16.1055**	**481.1755**	**497.2809**	**1.002**	**2.48E-03**	**519.0904**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7441	0.6272	3.1652	4.63E-03	0.3266	9.48E-03	0.3361	0.0873	8.70E-03	0.096	0	394.5176	394.5176	0.0208	0	394.9554
Unmitigated	0.7441	0.6272	3.1652	4.63E-03	0.3266	9.48E-03	0.3361	0.0873	8.70E-03	0.096	0	394.5176	394.5176	0.0208	0	394.9554

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	646.00	646.00	646.00	865,350	865,350

Total	646.00	646.00	646.00	865,350	865,350

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512383	0.057481	0.191072	0.155009	0.040497	0.005877	0.014205	0.012561	0.001412	0.002127	0.004643	0.000518	0.002213

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	2.33E-03	0.0212	0.0178	1.30E-04		1.61E-03	1.61E-03		1.61E-03	1.61E-03	0	23.0959	23.0959	4.40E-04	4.20E-04	23.2364
NaturalGas Unmitigated	2.33E-03	0.0212	0.0178	1.30E-04		1.61E-03	1.61E-03		1.61E-03	1.61E-03	0	23.0959	23.0959	4.40E-04	4.20E-04	23.2364
Electricity Mitigated						0	0		0	0	0	52.8836	52.8836	2.43E-03	5.00E-04	53.0906
Electricity Unmitigated						0	0		0	0	0	52.8836	52.8836	2.43E-03	5.00E-04	53.0906

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	432800	2.33E-03	0.0212	0.0178	1.30E-04		1.61E-03	1.61E-03		1.61E-03	1.61E-03	0	23.0959	23.0959	4.40E-04	4.20E-04	23.2364
Total		**2.33E-03**	**0.0212**	**0.0178**	**1.30E-04**		**1.61E-03**	**1.61E-03**		**1.61E-03**	**1.61E-03**	**0**	**23.0959**	**23.0959**	**4.40E-04**	**4.20E-04**	**23.2364**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	184800	52.8836	2.43E-03	5.00E-04	53.0906
Total		**52.8836**	**2.43E-03**	**5.00E-04**	**53.0906**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0955	0	2.70E-04	0		0	0		0	0	0	5.00E-04	5.00E-04	0	0	5.30E-04
Unmitigated	0.0955	0	2.70E-04	0		0	0		0	0	0	5.00E-04	5.00E-04	0	0	5.30E-04

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	0.0232					0	0		0	0	0	0	0	0	0	0
Consumer Products	0.0723					0	0		0	0	0	0	0	0	0	0
Landscaping	3.00E-05	0	2.70E-04	0		0	0		0	0	0	5.00E-04	5.00E-04	0	0	5.30E-04
Total	**0.0955**	**0**	**2.70E-04**	**0**		**0**	**0**		**0**	**0**	**0**	**5.00E-04**	**5.00E-04**	**0**	**0**	**5.30E-04**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	11.2748	0.0618	1.55E-03	13.0529
Mitigated	11.2748	0.0618	1.55E-03	13.052

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.88162 / 1.15325	11.2748	0.0618	1.55E-03	13.052
Total		**11.2748**	**0.0618**	**1.55E-03**	**13.052**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.5085	0.9165	0	34.7556
Unmitigated	15.5085	0.9165	0	34.7556

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	76.4	15.5085	0.9165	0	34.7556

Total		15.5085	0.9165	0	34.7556

Harbor Walk Apartment Homes

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	150	Dwelling Unit	2.42	150,000.00	429

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Off-road Equipment - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Grading - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Demolition - Construction based on "AQ GHG Noise Data for BonTerra.xls"

Trips and VMT - Based on CalEEMod Defaults

Vehicle Trips - Based on Traffic Study (LLG 2013)

Woodstoves - No Hearth

Operational Off-Road Equipment - Emergency Generator for Sump Pump

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10	65
tblConstructionPhase	NumDays	220	304

tblConstructionPhase	NumDays	6	20
tblConstructionPhase	NumDays	10	2
tblConstructionPhase	PhaseEndDate	3/31/2016	1/29/2016
tblConstructionPhase	PhaseEndDate	2/2/2016	1/5/2016
tblConstructionPhase	PhaseEndDate	10/24/2014	10/31/2014
tblConstructionPhase	PhaseStartDate	1/1/2016	11/2/2015
tblConstructionPhase	PhaseStartDate	11/1/2014	11/3/2014
tblConstructionPhase	PhaseStartDate	8/30/2014	9/1/2014
tblConstructionPhase	PhaseStartDate	1/30/2016	1/4/2016
tblConstructionPhase	PhaseStartDate	9/27/2014	10/6/2014
tblFireplaces	FireplaceWoodMass	1,019.20	0
tblFireplaces	NumberGas	127.5	0
tblFireplaces	NumberNoFireplace	15	150
tblFireplaces	NumberWood	7.5	0
tblGrading	AcresOfGrading	10	2.76
tblGrading	MaterialExported	0	15,850.00
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0	1
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Underground Infrastructure/Utilities
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Underground Infrastructure/Utilities
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOperationalOffRoadEquipment	OperDaysPerYear	260	4
tblOperationalOffRoadEquipment	OperHoursPerDay	8	1
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0	1
tblProjectCharacteristics	OperationalYear	2014	2016
tblSequestration	NumberOfNewTrees	0	59
tblTripsAndVMT	HaulingTripNumber	0	350
tblVehicleTrips	ST_TR	7.16	6.65
tblVehicleTrips	SU_TR	6.07	6.65
tblVehicleTrips	WD_TR	6.59	6.65
tblWoodstoves	NumberCatalytic	7.5	0
tblWoodstoves	NumberNoncatalytic	7.5	0
tblWoodstoves	WoodstoveWoodMass	999.6	0

2.0 Emissions Summary

2.1 Overall Construction

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					
2014	0.249	1.3037	1.2904	2.35E-03	0.3759	0.0763	0.4522	0.0992	0.0702	0.1694	0	218.3721	218.3721	0.033	0	219.0644
2015	1.0504	2.8978	2.7665	5.13E-03	0.1729	0.1871	0.36	0.0462	0.1725	0.2187	0	454.5592	454.5592	0.0857	0	456.3598
2016	0.1998	0.044	0.0449	8.00E-05	2.70E-03	3.21E-03	5.91E-03	7.20E-04	3.11E-03	3.83E-03	0	6.7473	6.7473	9.20E-04	0	6.7666
Total	**1.4991**	**4.2455**	**4.1018**	**7.56E-03**	**0.5515**	**0.2667**	**0.8181**	**0.146**	**0.2459**	**0.3919**	**0**	**679.6787**	**679.6787**	**0.1196**	**0**	**682.1908**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6501	0.0184	1.5685	8.00E-05		8.46E-03	8.46E-03		8.46E-03	8.46E-03	0	2.5268	2.5268	2.58E-03	0	2.5809
Energy	6.97E-03	0.0595	0.0253	3.80E-04		4.81E-03	4.81E-03		4.81E-03	4.81E-03	0	218.2791	218.2791	8.19E-03	2.68E-03	219.2831
Mobile	2.1587	1.7378	7.7174	0.0176	1.2871	0.0228	1.3099	0.3439	0.021	0.3648	0	1,429.23	1,429.23	0.0607	0	1,430.50
Offroad	1.60E-04	1.21E-03	9.50E-04	0		8.00E-05	8.00E-05		8.00E-05	8.00E-05	0	0.1413	0.1413	1.00E-05	0	0.1416
Waste						0	0		0	0	14.0064	0	14.0064	0.8278	0	31.3892
Water						0	0		0	0	3.1006	56.0051	59.1056	0.321	8.04E-03	68.3385
Total	**2.8159**	**1.8169**	**9.3121**	**0.018**	**1.2871**	**0.0362**	**1.3233**	**0.3439**	**0.0343**	**0.3782**	**17.1069**	**1,706.18**	**1,723.29**	**1.2202**	**0.0107**	**1,752.23**

2.3 Vegetation

Vegetation

	CO_2e
Category	MT
New Trees	41.772
Vegetation Land Change	0
Total	**41.772**

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	8/4/2014	8/29/2014	5	20	
2	Grading	Grading	9/1/2014	9/26/2014	5	20	
3	Underground Infrastructure/Utilities	Trenching	10/6/2014	10/31/2014	5	20	
4	Building Construction	Building Construction	11/3/2014	12/31/2015	5	304	
5	Architectural Coating	Architectural Coating	11/2/2015	1/29/2016	5	65	
6	Paving	Paving	1/4/2016	1/5/2016	5	2	

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Cement and Mortar Mixers	1	8	9	0.56
Grading	Scrapers	1	6	361	0.48
Building Construction	Cranes	1	8	226	0.29
Demolition	Excavators	1	6	162	0.38

Paving	Pavers	1	8	125	0.42
Paving	Rollers	2	8	80	0.38
Demolition	Rubber Tired Dozers	1	8	255	0.4
Grading	Rubber Tired Dozers	1	8	255	0.4
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37
Demolition	Off-Highway Trucks	1	4	400	0.38
Underground Infrastructure/Utilities	Tractors/Loaders/Backhoes	1	6	97	0.37
Paving	Paving Equipment	1	8	130	0.36
Grading	Excavators	1	6	162	0.38
Grading	Off-Highway Trucks	1	4	400	0.38
Underground Infrastructure/Utilities	Excavators	1	8	162	0.38
Building Construction	Skid Steer Loaders	1	6	64	0.37
Building Construction	Graders	1	6	174	0.41
Building Construction	Off-Highway Trucks	1	4	400	0.38

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	5	13	0	350	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Underground Infrastructure/Utilities				0			20	LD_Mix	HDT_Mix	HHDT
Grading	4	10	0	1,981.00	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Building Construction	8	108	16	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Paving	6	15	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2014

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					0.0146	0	0.0146	2.21E-03	0	2.21E-03	0	0	0	0	0	0
Off-Road	0.0248	0.1801	0.1884	2.30E-04		0.0138	0.0138		0.0127	0.0127	0	21.6948	21.6948	6.41E-03	0	21.8294
Total	**0.0248**	**0.1801**	**0.1884**	**2.30E-04**	**0.0146**	**0.0138**	**0.0284**	**2.21E-03**	**0.0127**	**0.0149**	**0**	**21.6948**	**21.6948**	**6.41E-03**	**0**	**21.8294**

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	0.0101	0.0656	0.0443	1.30E-04	0.0461	1.17E-03	0.0472	0.0114	1.07E-03	0.0125	0	12.0534	12.0534	1.00E-04	0	12.0556
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	2.78E-03	8.10E-04	8.39E-03	2.00E-05	1.43E-03	1.00E-05	1.44E-03	3.80E-04	1.00E-05	3.90E-04	0	1.3821	1.3821	7.00E-05	0	1.3837
Total	**0.0129**	**0.0664**	**0.0527**	**1.50E-04**	**0.0475**	**1.18E-03**	**0.0487**	**0.0118**	**1.08E-03**	**0.0129**	**0**	**13.4355**	**13.4355**	**1.70E-04**	**0**	**13.4392**

3.3 Grading - 2014

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					0.0244	0	0.0244	0.013	0	0.013	0	0	0	0	0	0
Off-Road	0.0353	0.1757	0.2746	3.30E-04		0.0192	0.0192		0.0177	0.0177	0	32.0648	32.0648	9.48E-03	0	32.2638
Total	**0.0353**	**0.1757**	**0.2746**	**3.30E-04**	**0.0244**	**0.0192**	**0.0436**	**0.013**	**0.0177**	**0.0307**	**0**	**32.0648**	**32.0648**	**9.48E-03**	**0**	**32.2638**

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	0.0571	0.3712	0.2506	7.30E-04	0.2607	6.60E-03	0.2673	0.0645	6.07E-03	0.0705	0	68.2221	68.2221	5.90E-04	0	68.2344
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	2.14E-03	6.20E-04	6.46E-03	1.00E-05	1.10E-03	1.00E-05	1.11E-03	2.90E-04	1.00E-05	3.00E-04	0	1.0632	1.0632	6.00E-05	0	1.0644
Total	**0.0592**	**0.3718**	**0.2571**	**7.40E-04**	**0.2618**	**6.61E-03**	**0.2684**	**0.0648**	**6.08E-03**	**0.0708**	**0**	**69.2853**	**69.2853**	**6.50E-04**	**0**	**69.2988**

3.4 Underground Infrastructure/Utilities - 2014

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	6.99E-03	0.0265	0.0524	8.00E-05		4.56E-03	4.56E-03		4.20E-03	4.20E-03	0	7.3351	7.3351	2.17E-03	0	7.3806

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**6.99E-03**	**0.0265**	**0.0524**	**8.00E-05**		**4.56E-03**	**4.56E-03**		**4.20E-03**	**4.20E-03**	**0**	**7.3351**	**7.3351**	**2.17E-03**	**0**	**7.3806**

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor					0	0	0	0	0	0	0	0	0	0	0	0
Worker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

3.5 Building Construction - 2014

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	0.0529	0.4284	0.2689	4.50E-04		0.0301	0.0301		0.0277	0.0277	0	42.96	42.96	0.0127	0	43.2266
Total	**0.0529**	**0.4284**	**0.2689**	**4.50E-04**		**0.0301**	**0.0301**		**0.0277**	**0.0277**	**0**	**42.96**	**42.96**	**0.0127**	**0**	**43.2266**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	7.27E-03	0.0404	0.0465	7.00E-05	2.12E-03	7.40E-04	2.86E-03	6.00E-04	6.80E-04	1.29E-03	0	6.9098	6.9098	6.00E-05	0	6.9111
Worker	0.0496	0.0145	0.1499	3.00E-04	0.0255	2.00E-04	0.0257	6.77E-03	1.80E-04	6.95E-03	0	24.6869	24.6869	1.33E-03	0	24.7148
Total	**0.0569**	**0.0549**	**0.1964**	**3.70E-04**	**0.0276**	**9.40E-04**	**0.0286**	**7.37E-03**	**8.60E-04**	**8.24E-03**	**0**	**31.5967**	**31.5967**	**1.39E-03**	**0**	**31.6259**

3.5 Building Construction - 2015

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.315	2.5463	1.6159	2.71E-03		0.1776	0.1776		0.1634	0.1634	0	258.0685	258.0685	0.077	0	259.6865
Total	**0.315**	**2.5463**	**1.6159**	**2.71E-03**		**0.1776**	**0.1776**		**0.1634**	**0.1634**	**0**	**258.0685**	**258.0685**	**0.077**	**0**	**259.6865**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vendor	0.0388	0.2135	0.261	4.50E-04	0.0129	3.46E-03	0.0163	3.67E-03	3.18E-03	6.85E-03	0	41.3852	41.3852	3.30E-04	0	41.3921
Worker	0.2809	0.0789	0.8197	1.84E-03	0.1547	1.14E-03	0.1559	0.0411	1.05E-03	0.0421	0	144.5317	144.5317	7.39E-03	0	144.6868
Total	**0.3198**	**0.2923**	**1.0807**	**2.29E-03**	**0.1676**	**4.60E-03**	**0.1722**	**0.0448**	**4.23E-03**	**0.049**	**0**	**185.9169**	**185.9169**	**7.72E-03**	**0**	**186.0789**

3.6 Architectural Coating - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3971					0	0		0	0	0	0	0	0	0	0
Off-Road	8.93E-03	0.0565	0.0418	7.00E-05		4.85E-03	4.85E-03		4.85E-03	4.85E-03	0	5.6105	5.6105	7.30E-04	0	5.6258
Total	**0.406**	**0.0565**	**0.0418**	**7.00E-05**		**4.85E-03**	**4.85E-03**		**4.85E-03**	**4.85E-03**	**0**	**5.6105**	**5.6105**	**7.30E-04**	**0**	**5.6258**

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	9.65E-03	2.71E-03	0.0282	6.00E-05	5.31E-03	4.00E-05	5.35E-03	1.41E-03	4.00E-05	1.45E-03	0	4.9633	4.9633	2.50E-04	0	4.9687
Total	**9.65E-03**	**2.71E-03**	**0.0282**	**6.00E-05**	**5.31E-03**	**4.00E-05**	**5.35E-03**	**1.41E-03**	**4.00E-05**	**1.45E-03**	**0**	**4.9633**	**4.9633**	**2.50E-04**	**0**	**4.9687**

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1895					0	0		0	0	0	0	0	0	0	0
Off-Road	3.86E-03	0.0249	0.0198	3.00E-05		2.06E-03	2.06E-03		2.06E-03	2.06E-03	0	2.6777	2.6777	3.20E-04	0	2.6844
Total	**0.1934**	**0.0249**	**0.0198**	**3.00E-05**		**2.06E-03**	**2.06E-03**		**2.06E-03**	**2.06E-03**	**0**	**2.6777**	**2.6777**	**3.20E-04**	**0**	**2.6844**

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	4.31E-03	1.17E-03	0.0122	3.00E-05	2.54E-03	2.00E-05	2.55E-03	6.70E-04	2.00E-05	6.90E-04	0	2.2858	2.2858	1.10E-04	0	2.2881
Total	**4.31E-03**	**1.17E-03**	**0.0122**	**3.00E-05**	**2.54E-03**	**2.00E-05**	**2.55E-03**	**6.70E-04**	**2.00E-05**	**6.90E-04**	**0**	**2.2858**	**2.2858**	**1.10E-04**	**0**	**2.2881**

3.7 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	1.78E-03	0.0179	0.0121	2.00E-05		1.12E-03	1.12E-03		1.04E-03	1.04E-03	0	1.6354	1.6354	4.80E-04	0	1.6456
Paving	0					0	0		0	0	0	0	0	0	0	0
Total	**1.78E-03**	**0.0179**	**0.0121**	**2.00E-05**		**1.12E-03**	**1.12E-03**		**1.04E-03**	**1.04E-03**	**0**	**1.6354**	**1.6354**	**4.80E-04**	**0**	**1.6456**

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	2.80E-04	8.00E-05	7.90E-04	0	1.60E-04	0	1.70E-04	4.00E-05	0	4.00E-05	0	0.1484	0.1484	1.00E-05	0	0.1486
Total	**2.80E-04**	**8.00E-05**	**7.90E-04**	**0**	**1.60E-04**	**0**	**1.70E-04**	**4.00E-05**	**0**	**4.00E-05**	**0**	**0.1484**	**0.1484**	**1.00E-05**	**0**	**0.1486**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1587	1.7378	7.7174	0.0176	1.2871	0.0228	1.3099	0.3439	0.021	0.3648	0	1,429.23	1,429.23	0.0607	0	1,430.50
Unmitigated	2.1587	1.7378	7.7174	0.0176	1.2871	0.0228	1.3099	0.3439	0.021	0.3648	0	1,429.23	1,429.23	0.0607	0	1,430.50

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	997.50	997.50	997.50	3,408,609	3,408,609
Total	997.50	997.50	997.50	3,408,609	3,408,609

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511437	0.057382	0.191336	0.153047	0.041226	0.005877	0.014979	0.013726	0.001416	0.002136	0.004703	0.00051	0.002224

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0	0		0	0	0	149.3293	149.3293	6.86E-03	1.42E-03	149.9137
Electricity Unmitigated						0	0		0	0	0	149.3293	149.3293	6.86E-03	1.42E-03	149.9137
NaturalGas Mitigated	6.97E-03	0.0595	0.0253	3.80E-04		4.81E-03	4.81E-03		4.81E-03	4.81E-03	0	68.9498	68.9498	1.32E-03	1.26E-03	69.3694
NaturalGas Unmitigated	6.97E-03	0.0595	0.0253	3.80E-04		4.81E-03	4.81E-03		4.81E-03	4.81E-03	0	68.9498	68.9498	1.32E-03	1.26E-03	69.3694

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	1.29E+06	6.97E-03	0.0595	0.0253	3.80E-04		4.81E-03	4.81E-03		4.81E-03	4.81E-03	0	68.9498	68.9498	1.32E-03	1.26E-03	69.3694
Total		**6.97E-03**	**0.0595**	**0.0253**	**3.80E-04**		**4.81E-03**	**4.81E-03**		**4.81E-03**	**4.81E-03**	**0**	**68.9498**	**68.9498**	**1.32E-03**	**1.26E-03**	**69.3694**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	521826	149.3293	6.86E-03	1.42E-03	149.9137
Total		**149.3293**	**6.86E-03**	**1.42E-03**	**149.9137**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6501	0.0184	1.5685	8.00E-05		8.46E-03	8.46E-03		8.46E-03	8.46E-03	0	2.5268	2.5268	2.58E-03	0	2.5809
Unmitigated	0.6501	0.0184	1.5685	8.00E-05		8.46E-03	8.46E-03		8.46E-03	8.46E-03	0	2.5268	2.5268	2.58E-03	0	2.5809

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	0.0587					0	0		0	0	0	0	0	0	0	0
Consumer Products	0.542					0	0		0	0	0	0	0	0	0	0
Hearth	0	0	0	0		0	0		0	0	0	0	0	0	0	0
Landscaping	0.0494	0.0184	1.5685	8.00E-05		8.46E-03	8.46E-03		8.46E-03	8.46E-03	0	2.5268	2.5268	2.58E-03	0	2.5809
Total	**0.6501**	**0.0184**	**1.5685**	**8.00E-05**		**8.46E-03**	**8.46E-03**		**8.46E-03**	**8.46E-03**	**0**	**2.5268**	**2.5268**	**2.58E-03**	**0**	**2.5809**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	59.1056	0.321	8.04E-03	68.3385

Unmitigated	59.1056	0.321	8.05E-03	68.3434

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	9.7731 / 6.1613	59.1056	0.321	8.04E-03	68.3385
Total		**59.1056**	**0.321**	**8.04E-03**	**68.3385**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.0064	0.8278	0	31.3892
Unmitigated	14.0064	0.8278	0	31.3892

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	69	14.0064	0.8278	0	31.3892
Total		**14.0064**	**0.8278**	**0**	**31.3892**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	1	4	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Generator Sets	1.60E-04	1.21E-03	9.50E-04	0		8.00E-05	8.00E-05		8.00E-05	8.00E-05	0	0.1413	0.1413	1.00E-05	0	0.1416
Total	**1.60E-04**	**1.21E-03**	**9.50E-04**	**0**		**8.00E-05**	**8.00E-05**		**8.00E-05**	**8.00E-05**	**0**	**0.1413**	**0.1413**	**1.00E-05**	**0**	**0.1416**

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			

Unmitigated	41.772	0	0	41.772

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	0 / 0	0	0	0	0
Total		**0**	**0**	**0**	**0**

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	59	41.772	0	0	41.772
Total		**41.772**	**0**	**0**	**41.772**