

# **ATTACHMENT A**

*CalEEMod Output –  
Original and Amended Project (2013)  
Construction Emissions  
Winter, Summer, and Annual Output*

**Westar Final Phase - Mixed-Use Construction**  
**Santa Barbara-South of Santa Ynez Range County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	5.00	Dwelling Unit	0.00	9,426.00	14
Regional Shopping Center	12.69	1000sqft	1.84	12,687.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8			<b>Operational Year</b>	2016
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Land Use - Development of 22,113 square feet in mixed uses including 5 condo units totaling 9,426 square feet and 12,687 square feet in retail over a 1.84 acre site.

Construction Phase - Default phasing assumed except for grading phase which would last 12 days.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Trips and VMT - 834 total trucks over haul period.

Grading - Export of 7,500 cubic yards of soil.

Architectural Coating - Comply with SBCAPCD's Rule 323.

Construction Off-road Equipment Mitigation - Water exposed surface areas twice daily. Reduce vehicle speeds to 15 mph.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblConstructionPhase	NumDays	4.00	12.00
tblGrading	MaterialExported	0.00	7,500.00
tblGrading	MaterialSiltContent	6.90	4.30
tblGrading	MeanVehicleSpeed	7.10	40.00
tblLandUse	LandUseSquareFeet	5,000.00	9,426.00
tblLandUse	LandUseSquareFeet	12,690.00	12,687.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	0.29	1.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	938.00	834.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

## 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					
2017	23.8978	39.5880	37.2475	0.0660	6.3180	1.3002	7.6182	1.9101	1.1961	3.1062	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546
Total	23.8978	39.5880	37.2475	0.0660	6.3180	1.3002	7.6182	1.9101	1.1961	3.1062	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546



**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					
2017	23.8978	39.5880	37.2475	0.0660	3.5458	1.3002	4.8460	1.0513	1.1961	2.2474	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546
Total	23.8978	39.5880	37.2475	0.0660	3.5458	1.3002	4.8460	1.0513	1.1961	2.2474	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	43.88	0.00	36.39	44.96	0.00	27.65	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading/Soil Export/Hauling	Grading	1/1/2017	1/17/2017	5	12	
2	Building Construction	Building Construction	1/18/2017	10/24/2017	5	200	
3	Paving	Paving	10/25/2017	11/7/2017	5	10	
4	Architectural Coating	Architectural Coating	11/8/2017	11/21/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 19,088; Residential Outdoor: 6,363; Non-Residential Indoor: 19,031; Non-Residential Outdoor: 6,344 (Architectural



**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Soil Export/Hauling	Graders	1	6.00	174	0.41
Grading/Soil Export/Hauling	Rubber Tired Dozers	1	6.00	255	0.40
Grading/Soil Export/Hauling	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading/Soil Export/Hauling	3	8.00	0.00	834.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Grading/Soil Export/Hauling - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0404	0.0000	5.0404	1.5615	0.0000	1.5615			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>5.0404</b>	<b>1.0661</b>	<b>6.1065</b>	<b>1.5615</b>	<b>0.9808</b>	<b>2.5423</b>		<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

#### 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	1.6013	19.7471	23.6283	0.0511	1.2028	0.2335	1.4363	0.3288	0.2147	0.5435		5,054.6236	5,054.6236	0.0344		5,055.3455
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	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003		63.6595
<b>Total</b>	<b>1.6319</b>	<b>19.7991</b>	<b>24.0689</b>	<b>0.0519</b>	<b>1.2776</b>	<b>0.2340</b>	<b>1.5117</b>	<b>0.3486</b>	<b>0.2152</b>	<b>0.5639</b>		<b>5,118.2054</b>	<b>5,118.2054</b>	<b>0.0381</b>		<b>5,119.0050</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
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Category	lb/day										lb/day					
Fugitive Dust					2.2682	0.0000	2.2682	0.7027	0.0000	0.7027			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>2.2682</b>	<b>1.0661</b>	<b>3.3343</b>	<b>0.7027</b>	<b>0.9808</b>	<b>1.6835</b>	<b>0.0000</b>	<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

**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	1.6013	19.7471	23.6283	0.0511	1.2028	0.2335	1.4363	0.3288	0.2147	0.5435		5,054.6236	5,054.6236	0.0344		5,055.3455
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	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003		63.6595
<b>Total</b>	<b>1.6319</b>	<b>19.7991</b>	<b>24.0689</b>	<b>0.0519</b>	<b>1.2776</b>	<b>0.2340</b>	<b>1.5117</b>	<b>0.3486</b>	<b>0.2152</b>	<b>0.5639</b>		<b>5,118.2054</b>	<b>5,118.2054</b>	<b>0.0381</b>		<b>5,119.0050</b>

**3.3 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>		<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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
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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	0.0000
Vendor	0.0449	0.2698	0.6742	6.1000e-004	0.0166	3.4500e-003	0.0201	4.7300e-003	3.1700e-003	7.9000e-003		59.9492	59.9492	5.0000e-004		59.9597
Worker	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003		63.6595
<b>Total</b>	<b>0.0754</b>	<b>0.3218</b>	<b>1.1148</b>	<b>1.4000e-003</b>	<b>0.0915</b>	<b>3.9800e-003</b>	<b>0.0954</b>	<b>0.0246</b>	<b>3.6500e-003</b>	<b>0.0282</b>		<b>123.5311</b>	<b>123.5311</b>	<b>4.2000e-003</b>		<b>123.6193</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>	<b>0.0000</b>	<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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	0.0449	0.2698	0.6742	6.1000e-004	0.0166	3.4500e-003	0.0201	4.7300e-003	3.1700e-003	7.9000e-003		59.9492	59.9492	5.0000e-004		59.9597
Worker	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003		63.6595
<b>Total</b>	<b>0.0754</b>	<b>0.3218</b>	<b>1.1148</b>	<b>1.4000e-003</b>	<b>0.0915</b>	<b>3.9800e-003</b>	<b>0.0954</b>	<b>0.0246</b>	<b>3.6500e-003</b>	<b>0.0282</b>		<b>123.5311</b>	<b>123.5311</b>	<b>4.2000e-003</b>		<b>123.6193</b>

**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	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>		<b>1,356.1677</b>

**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	0.0534	0.0909	0.7711	1.3900e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		111.2682	111.2682	6.4700e-003		111.4042
<b>Total</b>	<b>0.0534</b>	<b>0.0909</b>	<b>0.7711</b>	<b>1.3900e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>111.2682</b>	<b>111.2682</b>	<b>6.4700e-003</b>		<b>111.4042</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000



Total	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
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**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	0.0534	0.0909	0.7711	1.3900e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		111.2682	111.2682	6.4700e-003		111.4042
Total	0.0534	0.0909	0.7711	1.3900e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		111.2682	111.2682	6.4700e-003		111.4042

**3.5 Architectural Coating - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	23.5579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	23.8902	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

**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	0.0000
Worker	7.6300e-003	0.0130	0.1102	2.0000e-004	0.0187	1.3000e-004	0.0188	4.9600e-003	1.2000e-004	5.0800e-003		15.8955	15.8955	9.2000e-004	15.9149
<b>Total</b>	<b>7.6300e-003</b>	<b>0.0130</b>	<b>0.1102</b>	<b>2.0000e-004</b>	<b>0.0187</b>	<b>1.3000e-004</b>	<b>0.0188</b>	<b>4.9600e-003</b>	<b>1.2000e-004</b>	<b>5.0800e-003</b>		<b>15.8955</b>	<b>15.8955</b>	<b>9.2000e-004</b>	<b>15.9149</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	23.5579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>23.8902</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**Mitigated Construction Off-Site**

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	7.6300e-003	0.0130	0.1102	2.0000e-004	0.0187	1.3000e-004	0.0188	4.9600e-003	1.2000e-004	5.0800e-003		15.8955	15.8955	9.2000e-004		15.9149
<b>Total</b>	<b>7.6300e-003</b>	<b>0.0130</b>	<b>0.1102</b>	<b>2.0000e-004</b>	<b>0.0187</b>	<b>1.3000e-004</b>	<b>0.0188</b>	<b>4.9600e-003</b>	<b>1.2000e-004</b>	<b>5.0800e-003</b>		<b>15.8955</b>	<b>15.8955</b>	<b>9.2000e-004</b>		<b>15.9149</b>

**Westar Final Phase - Mixed-Use Construction**  
**Santa Barbara-South of Santa Ynez Range County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	5.00	Dwelling Unit	0.00	9,426.00	14
Regional Shopping Center	12.69	1000sqft	1.84	12,687.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8			<b>Operational Year</b>	2016
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Land Use - Development of 22,113 square feet in mixed uses including 5 condo units totaling 9,426 square feet and 12,687 square feet in retail over a 1.84 acre site.

Construction Phase - Default phasing assumed except for grading phase which would last 12 days.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Trips and VMT - 834 total trucks over haul period.

Grading - Export of 7,500 cubic yards of soil.

Architectural Coating - Comply with SBCAPCD's Rule 323.



Construction Off-road Equipment Mitigation - Water exposed surface areas twice daily. Reduce vehicle speeds to 15 mph.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblConstructionPhase	NumDays	4.00	12.00
tblGrading	MaterialExported	0.00	7,500.00
tblGrading	MaterialSiltContent	6.90	4.30
tblGrading	MeanVehicleSpeed	7.10	40.00
tblLandUse	LandUseSquareFeet	5,000.00	9,426.00
tblLandUse	LandUseSquareFeet	12,690.00	12,687.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	0.29	1.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	938.00	834.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

## 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					
2017	23.8972	39.0984	31.8928	0.0660	6.3180	1.2993	7.6174	1.9101	1.1953	3.1054	0.0000	6,570.9816	6,570.9816	0.4786	0.0000	6,581.0311
<b>Total</b>	<b>23.8972</b>	<b>39.0984</b>	<b>31.8928</b>	<b>0.0660</b>	<b>6.3180</b>	<b>1.2993</b>	<b>7.6174</b>	<b>1.9101</b>	<b>1.1953</b>	<b>3.1054</b>	<b>0.0000</b>	<b>6,570.9816</b>	<b>6,570.9816</b>	<b>0.4786</b>	<b>0.0000</b>	<b>6,581.0311</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					
2017	23.8972	39.0984	31.8928	0.0660	3.5458	1.2993	4.8451	1.0513	1.1953	2.2466	0.0000	6,570.9816	6,570.9816	0.4786	0.0000	6,581.0311
Total	23.8972	39.0984	31.8928	0.0660	3.5458	1.2993	4.8451	1.0513	1.1953	2.2466	0.0000	6,570.9816	6,570.9816	0.4786	0.0000	6,581.0311

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	43.88	0.00	36.39	44.96	0.00	27.66	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading/Soil Export/Hauling	Grading	1/1/2017	1/17/2017	5	12	
2	Building Construction	Building Construction	1/18/2017	10/24/2017	5	200	
3	Paving	Paving	10/25/2017	11/7/2017	5	10	
4	Architectural Coating	Architectural Coating	11/8/2017	11/21/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 19,088; Residential Outdoor: 6,363; Non-Residential Indoor: 19,031; Non-Residential Outdoor: 6,344 (Architectural

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Soil Export/Hauling	Graders	1	6.00	174	0.41
Grading/Soil Export/Hauling	Rubber Tired Dozers	1	6.00	255	0.40
Grading/Soil Export/Hauling	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading/Soil Export/Hauling	3	8.00	0.00	834.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT



Architectural Coating	1	2.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHD
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### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Grading/Soil Export/Hauling - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0404	0.0000	5.0404	1.5615	0.0000	1.5615			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>5.0404</b>	<b>1.0661</b>	<b>6.1065</b>	<b>1.5615</b>	<b>0.9808</b>	<b>2.5423</b>		<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

#### 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	1.3894	19.2640	18.2933	0.0512	1.2028	0.2327	1.4355	0.3288	0.2140	0.5428		5,066.7051	5,066.7051	0.0339		5,067.4166
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	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003		65.1648
<b>Total</b>	<b>1.4174</b>	<b>19.3095</b>	<b>18.7142</b>	<b>0.0520</b>	<b>1.2776</b>	<b>0.2332</b>	<b>1.5108</b>	<b>0.3486</b>	<b>0.2145</b>	<b>0.5631</b>		<b>5,131.7922</b>	<b>5,131.7922</b>	<b>0.0376</b>		<b>5,132.5814</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					2.2682	0.0000	2.2682	0.7027	0.0000	0.7027			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>2.2682</b>	<b>1.0661</b>	<b>3.3343</b>	<b>0.7027</b>	<b>0.9808</b>	<b>1.6835</b>	<b>0.0000</b>	<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

**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	1.3894	19.2640	18.2933	0.0512	1.2028	0.2327	1.4355	0.3288	0.2140	0.5428		5,066.7051	5,066.7051	0.0339		5,067.4166
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	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003		65.1648
<b>Total</b>	<b>1.4174</b>	<b>19.3095</b>	<b>18.7142</b>	<b>0.0520</b>	<b>1.2776</b>	<b>0.2332</b>	<b>1.5108</b>	<b>0.3486</b>	<b>0.2145</b>	<b>0.5631</b>		<b>5,131.7922</b>	<b>5,131.7922</b>	<b>0.0376</b>		<b>5,132.5814</b>

**3.3 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>		<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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
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Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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	0.0362	0.2659	0.4698	6.2000e-004	0.0166	3.3800e-003	0.0200	4.7300e-003	3.1100e-003	7.8400e-003		60.6690	60.6690	4.8000e-004		60.6791
Worker	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003		65.1648
<b>Total</b>	<b>0.0643</b>	<b>0.3114</b>	<b>0.8907</b>	<b>1.4300e-003</b>	<b>0.0915</b>	<b>3.9100e-003</b>	<b>0.0954</b>	<b>0.0246</b>	<b>3.5900e-003</b>	<b>0.0282</b>		<b>125.7560</b>	<b>125.7560</b>	<b>4.1800e-003</b>		<b>125.8439</b>

**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	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>	<b>0.0000</b>	<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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	0.0000	0.0000	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	0.0362	0.2659	0.4698	6.2000e-004	0.0166	3.3800e-003	0.0200	4.7300e-003	3.1100e-003	7.8400e-003		60.6690	60.6690	4.8000e-004		60.6791
Worker	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003		65.1648
<b>Total</b>	<b>0.0643</b>	<b>0.3114</b>	<b>0.8907</b>	<b>1.4300e-003</b>	<b>0.0915</b>	<b>3.9100e-003</b>	<b>0.0954</b>	<b>0.0246</b>	<b>3.5900e-003</b>	<b>0.0282</b>		<b>125.7560</b>	<b>125.7560</b>	<b>4.1800e-003</b>		<b>125.8439</b>

**3.4 Paving - 2017**

**Unmitigated Construction On-Site**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>		<b>1,356.1677</b>

**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	0.0490	0.0796	0.7366	1.4200e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		113.9024	113.9024	6.4700e-003		114.0383
<b>Total</b>	<b>0.0490</b>	<b>0.0796</b>	<b>0.7366</b>	<b>1.4200e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>113.9024</b>	<b>113.9024</b>	<b>6.4700e-003</b>		<b>114.0383</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>	<b>0.0000</b>	<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>		<b>1,356.1677</b>

**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
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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	0.0490	0.0796	0.7366	1.4200e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		113.9024	113.9024	6.4700e-003		114.0383
Total	0.0490	0.0796	0.7366	1.4200e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		113.9024	113.9024	6.4700e-003		114.0383

### 3.5 Architectural Coating - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	23.5579						0.0000	0.0000		0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721
Total	23.8902	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721

#### 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	7.0000e-003	0.0114	0.1052	2.0000e-004	0.0187	1.3000e-004	0.0188	4.9600e-003	1.2000e-004	5.0800e-003		16.2718	16.2718	9.2000e-004		16.2912

Total	7.0000e-003	0.0114	0.1052	2.0000e-004	0.0187	1.3000e-004	0.0188	4.9600e-003	1.2000e-004	5.0800e-003		16.2718	16.2718	9.2000e-004		16.2912
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**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	23.5579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>23.8902</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**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	7.0000e-003	0.0114	0.1052	2.0000e-004	0.0187	1.3000e-004	0.0188	4.9600e-003	1.2000e-004	5.0800e-003		16.2718	16.2718	9.2000e-004		16.2912
<b>Total</b>	<b>7.0000e-003</b>	<b>0.0114</b>	<b>0.1052</b>	<b>2.0000e-004</b>	<b>0.0187</b>	<b>1.3000e-004</b>	<b>0.0188</b>	<b>4.9600e-003</b>	<b>1.2000e-004</b>	<b>5.0800e-003</b>		<b>16.2718</b>	<b>16.2718</b>	<b>9.2000e-004</b>		<b>16.2912</b>



**Westar Final Phase - Mixed-Use Construction**  
**Santa Barbara-South of Santa Ynez Range County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	5.00	Dwelling Unit	0.00	9,426.00	14
Regional Shopping Center	12.69	1000sqft	1.84	12,687.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8			<b>Operational Year</b>	2016
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Land Use - Development of 22,113 square feet in mixed uses including 5 condo units totaling 9,426 square feet and 12,687 square feet in retail over a 1.84 acre site.

Construction Phase - Default phasing assumed except for grading phase which would last 12 days.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Trips and VMT - 834 total trucks over haul period.

Grading - Export of 7,500 cubic yards of soil.

Architectural Coating - Comply with SBCAPCD's Rule 323.

Construction Off-road Equipment Mitigation - Water exposed surface areas twice daily. Reduce vehicle speeds to 15 mph.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblConstructionPhase	NumDays	4.00	12.00
tblGrading	MaterialExported	0.00	7,500.00
tblGrading	MaterialSiltContent	6.90	4.30
tblGrading	MeanVehicleSpeed	7.10	40.00
tblLandUse	LandUseSquareFeet	5,000.00	9,426.00
tblLandUse	LandUseSquareFeet	12,690.00	12,687.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	0.29	1.84
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	938.00	834.00
tblTripsAndVMT	VendorTripNumber	3.00	4.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

## 2.0 Emissions Summary

### 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					
2017	0.4486	2.2543	1.8021	2.8200e-003	0.0474	0.1353	0.1827	0.0140	0.1300	0.1440	0.0000	239.4980	239.4980	0.0437	0.0000	240.4160
Total	0.4486	2.2543	1.8021	2.8200e-003	0.0474	0.1353	0.1827	0.0140	0.1300	0.1440	0.0000	239.4980	239.4980	0.0437	0.0000	240.4160



**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					
2017	0.4486	2.2543	1.8021	2.8200e-003	0.0308	0.1353	0.1661	8.8800e-003	0.1300	0.1389	0.0000	239.4978	239.4978	0.0437	0.0000	240.4158
Total	0.4486	2.2543	1.8021	2.8200e-003	0.0308	0.1353	0.1661	8.8800e-003	0.1300	0.1389	0.0000	239.4978	239.4978	0.0437	0.0000	240.4158

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	35.05	0.00	9.11	36.71	0.00	3.58	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading/Soil Export/Hauling	Grading	1/1/2017	1/17/2017	5	12	
2	Building Construction	Building Construction	1/18/2017	10/24/2017	5	200	
3	Paving	Paving	10/25/2017	11/7/2017	5	10	
4	Architectural Coating	Architectural Coating	11/8/2017	11/21/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 19,088; Residential Outdoor: 6,363; Non-Residential Indoor: 19,031; Non-Residential Outdoor: 6,344 (Architectural

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Soil Export/Hauling	Graders	1	6.00	174	0.41
Grading/Soil Export/Hauling	Rubber Tired Dozers	1	6.00	255	0.40
Grading/Soil Export/Hauling	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading/Soil Export/Hauling	3	8.00	0.00	834.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT



### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Grading/Soil Export/Hauling - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0302	0.0000	0.0302	9.3700e-003	0.0000	9.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1187	0.0791	8.0000e-005		6.4000e-003	6.4000e-003		5.8800e-003	5.8800e-003	0.0000	7.8337	7.8337	2.4000e-003	0.0000	7.8841
<b>Total</b>	<b>0.0113</b>	<b>0.1187</b>	<b>0.0791</b>	<b>8.0000e-005</b>	<b>0.0302</b>	<b>6.4000e-003</b>	<b>0.0366</b>	<b>9.3700e-003</b>	<b>5.8800e-003</b>	<b>0.0153</b>	<b>0.0000</b>	<b>7.8337</b>	<b>7.8337</b>	<b>2.4000e-003</b>	<b>0.0000</b>	<b>7.8841</b>

#### 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	9.0500e-003	0.1200	0.1287	3.1000e-004	7.0800e-003	1.4000e-003	8.4800e-003	1.9400e-003	1.2900e-003	3.2200e-003	0.0000	27.5510	27.5510	1.9000e-004	0.0000	27.5549
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	1.7000e-004	3.1000e-004	2.5700e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3466	0.3466	2.0000e-005	0.0000	0.3470
<b>Total</b>	<b>9.2200e-003</b>	<b>0.1203</b>	<b>0.1313</b>	<b>3.1000e-004</b>	<b>7.5200e-003</b>	<b>1.4000e-003</b>	<b>8.9200e-003</b>	<b>2.0600e-003</b>	<b>1.2900e-003</b>	<b>3.3400e-003</b>	<b>0.0000</b>	<b>27.8976</b>	<b>27.8976</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>27.9019</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
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Category	tons/yr										MT/yr					
Fugitive Dust					0.0136	0.0000	0.0136	4.2200e-003	0.0000	4.2200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1187	0.0791	8.0000e-005		6.4000e-003	6.4000e-003		5.8800e-003	5.8800e-003	0.0000	7.8337	7.8337	2.4000e-003	0.0000	7.8841
<b>Total</b>	<b>0.0113</b>	<b>0.1187</b>	<b>0.0791</b>	<b>8.0000e-005</b>	<b>0.0136</b>	<b>6.4000e-003</b>	<b>0.0200</b>	<b>4.2200e-003</b>	<b>5.8800e-003</b>	<b>0.0101</b>	<b>0.0000</b>	<b>7.8337</b>	<b>7.8337</b>	<b>2.4000e-003</b>	<b>0.0000</b>	<b>7.8841</b>

**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	9.0500e-003	0.1200	0.1287	3.1000e-004	7.0800e-003	1.4000e-003	8.4800e-003	1.9400e-003	1.2900e-003	3.2200e-003	0.0000	27.5510	27.5510	1.9000e-004	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	1.7000e-004	3.1000e-004	2.5700e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3466	0.3466	2.0000e-005	0.0000	0.3470
<b>Total</b>	<b>9.2200e-003</b>	<b>0.1203</b>	<b>0.1313</b>	<b>3.1000e-004</b>	<b>7.5200e-003</b>	<b>1.4000e-003</b>	<b>8.9200e-003</b>	<b>2.0600e-003</b>	<b>1.2900e-003</b>	<b>3.3400e-003</b>	<b>0.0000</b>	<b>27.8976</b>	<b>27.8976</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>27.9019</b>

**3.3 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
	Off-Road	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5473	184.5473	0.0387	0.0000
<b>Total</b>	<b>0.2955</b>	<b>1.9109</b>	<b>1.4311</b>	<b>2.2000e-003</b>		<b>0.1226</b>	<b>0.1226</b>		<b>0.1182</b>	<b>0.1182</b>	<b>0.0000</b>	<b>184.5473</b>	<b>184.5473</b>	<b>0.0387</b>	<b>0.0000</b>	<b>185.3605</b>

**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
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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	4.1000e-003	0.0274	0.0591	6.0000e-005	1.6300e-003	3.4000e-004	1.9700e-003	4.7000e-004	3.1000e-004	7.8000e-004	0.0000	5.4764	5.4764	4.0000e-005	0.0000	5.4773
Worker	2.8700e-003	5.1100e-003	0.0428	8.0000e-005	7.3200e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	5.7760	5.7760	3.4000e-004	0.0000	5.7830
<b>Total</b>	<b>6.9700e-003</b>	<b>0.0325</b>	<b>0.1019</b>	<b>1.4000e-004</b>	<b>8.9500e-003</b>	<b>3.9000e-004</b>	<b>9.3400e-003</b>	<b>2.4100e-003</b>	<b>3.6000e-004</b>	<b>2.7700e-003</b>	<b>0.0000</b>	<b>11.2524</b>	<b>11.2524</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>11.2604</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	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5471	184.5471	0.0387	0.0000	185.3603
<b>Total</b>	<b>0.2955</b>	<b>1.9109</b>	<b>1.4311</b>	<b>2.2000e-003</b>		<b>0.1226</b>	<b>0.1226</b>		<b>0.1182</b>	<b>0.1182</b>	<b>0.0000</b>	<b>184.5471</b>	<b>184.5471</b>	<b>0.0387</b>	<b>0.0000</b>	<b>185.3603</b>

**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	4.1000e-003	0.0274	0.0591	6.0000e-005	1.6300e-003	3.4000e-004	1.9700e-003	4.7000e-004	3.1000e-004	7.8000e-004	0.0000	5.4764	5.4764	4.0000e-005	0.0000	5.4773
Worker	2.8700e-003	5.1100e-003	0.0428	8.0000e-005	7.3200e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	5.7760	5.7760	3.4000e-004	0.0000	5.7830
<b>Total</b>	<b>6.9700e-003</b>	<b>0.0325</b>	<b>0.1019</b>	<b>1.4000e-004</b>	<b>8.9500e-003</b>	<b>3.9000e-004</b>	<b>9.3400e-003</b>	<b>2.4100e-003</b>	<b>3.6000e-004</b>	<b>2.7700e-003</b>	<b>0.0000</b>	<b>11.2524</b>	<b>11.2524</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>11.2604</b>

**3.4 Paving - 2017**

**Unmitigated Construction On-Site**



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
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>5.9300e-003</b>	<b>0.0605</b>	<b>0.0452</b>	<b>7.0000e-005</b>		<b>3.6700e-003</b>	<b>3.6700e-003</b>		<b>3.3800e-003</b>	<b>3.3800e-003</b>	<b>0.0000</b>	<b>6.1129</b>	<b>6.1129</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>6.1515</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	4.5000e-004	3.7500e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5054	0.5054	3.0000e-005	0.0000	0.5060
<b>Total</b>	<b>2.5000e-004</b>	<b>4.5000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.5054</b>	<b>0.5054</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5060</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	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
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>5.9300e-003</b>	<b>0.0605</b>	<b>0.0452</b>	<b>7.0000e-005</b>		<b>3.6700e-003</b>	<b>3.6700e-003</b>		<b>3.3800e-003</b>	<b>3.3800e-003</b>	<b>0.0000</b>	<b>6.1129</b>	<b>6.1129</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>6.1515</b>



**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	4.5000e-004	3.7500e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5054	0.5054	3.0000e-005	0.0000	0.5060
<b>Total</b>	<b>2.5000e-004</b>	<b>4.5000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>6.5000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.5054</b>	<b>0.5054</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5060</b>

**3.5 Architectural Coating - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
<b>Total</b>	<b>0.1195</b>	<b>0.0109</b>	<b>9.3400e-003</b>	<b>1.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.2795</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	4.0000e-005	6.0000e-005	5.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0722	0.0722	0.0000	0.0000	0.0723
<b>Total</b>	<b>4.0000e-005</b>	<b>6.0000e-005</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0722</b>	<b>0.0722</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0723</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
<b>Total</b>	<b>0.1195</b>	<b>0.0109</b>	<b>9.3400e-003</b>	<b>1.0000e-005</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>		<b>8.7000e-004</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.2795</b>

**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	4.0000e-005	6.0000e-005	5.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0722	0.0722	0.0000	0.0000	0.0723
<b>Total</b>	<b>4.0000e-005</b>	<b>6.0000e-005</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0722</b>	<b>0.0722</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0723</b>



**Westar Final Phase - Residential Construction**  
**Santa Barbara-South of Santa Ynez Range County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.42	Acre	0.42	0.00	0
Apartments Mid Rise	33.00	Dwelling Unit	1.42	44,255.00	90

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8			<b>Operational Year</b>	2016
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Land Use - Development of 33 apartment units totaling 44,255 square feet and a 0.42 acre park area on a 1.84 acre site.

Construction Phase - Default phasing assumed except for grading phase which would last 12 days.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Off-road Equipment - Default construction equipment assumed.

Trips and VMT - 834 total trucks over haul period.

Grading - Export of 7,500 cubic yards of soil.

Architectural Coating - Comply with SBCAPCD's Rule 323.

Construction Off-road Equipment Mitigation - Water exposed surface areas twice daily. Reduce vehicle speeds to 15 mph.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblConstructionPhase	NumDays	4.00	12.00
tblGrading	MaterialExported	0.00	7,500.00
tblLandUse	LandUseSquareFeet	18,295.20	0.00
tblLandUse	LandUseSquareFeet	33,000.00	44,255.00
tblLandUse	LotAcreage	0.87	1.42
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	938.00	834.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

## 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					
2017	55.7379	39.5880	37.2475	0.0660	6.2841	1.3002	7.5843	2.8882	1.1961	4.0843	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546
<b>Total</b>	<b>55.7379</b>	<b>39.5880</b>	<b>37.2475</b>	<b>0.0660</b>	<b>6.2841</b>	<b>1.3002</b>	<b>7.5843</b>	<b>2.8882</b>	<b>1.1961</b>	<b>4.0843</b>	<b>0.0000</b>	<b>6,557.3948</b>	<b>6,557.3948</b>	<b>0.4790</b>	<b>0.0000</b>	<b>6,567.4546</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					
2017	55.7379	39.5880	37.2475	0.0660	3.5306	1.3002	4.8307	1.4914	1.1961	2.6875	0.0000	6,557.3948	6,557.3948	0.4790	0.0000	6,567.4546
<b>Total</b>	<b>55.7379</b>	<b>39.5880</b>	<b>37.2475</b>	<b>0.0660</b>	<b>3.5306</b>	<b>1.3002</b>	<b>4.8307</b>	<b>1.4914</b>	<b>1.1961</b>	<b>2.6875</b>	<b>0.0000</b>	<b>6,557.3948</b>	<b>6,557.3948</b>	<b>0.4790</b>	<b>0.0000</b>	<b>6,567.4546</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>43.82</b>	<b>0.00</b>	<b>36.31</b>	<b>48.36</b>	<b>0.00</b>	<b>34.20</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading/Soil Export/Hauling	Grading	1/1/2017	1/17/2017	5	12	
2	Building Construction	Building Construction	1/18/2017	10/24/2017	5	200	
3	Paving	Paving	10/25/2017	11/7/2017	5	10	
4	Architectural Coating	Architectural Coating	11/8/2017	11/21/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 89,616; Residential Outdoor: 29,872; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Soil Export/Hauling	Graders	1	6.00	174	0.41
Grading/Soil Export/Hauling	Rubber Tired Dozers	1	6.00	255	0.40
Grading/Soil Export/Hauling	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading/Soil Export/Hauling	3	8.00	0.00	834.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	4.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT



Paving	5	14.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Grading/Soil Export/Hauling - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0065	0.0000	5.0065	2.5396	0.0000	2.5396			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>5.0065</b>	<b>1.0661</b>	<b>6.0726</b>	<b>2.5396</b>	<b>0.9808</b>	<b>3.5204</b>		<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

#### 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	1.6013	19.7471	23.6283	0.0511	1.2028	0.2335	1.4363	0.3288	0.2147	0.5435		5,054.6236	5,054.6236	0.0344		5,055.3455
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	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003		63.6595
<b>Total</b>	<b>1.6319</b>	<b>19.7991</b>	<b>24.0689</b>	<b>0.0519</b>	<b>1.2776</b>	<b>0.2340</b>	<b>1.5117</b>	<b>0.3486</b>	<b>0.2152</b>	<b>0.5639</b>		<b>5,118.2054</b>	<b>5,118.2054</b>	<b>0.0381</b>		<b>5,119.0050</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					2.2529	0.0000	2.2529	1.1428	0.0000	1.1428			0.0000				0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410			1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>2.2529</b>	<b>1.0661</b>	<b>3.3190</b>	<b>1.1428</b>	<b>0.9808</b>	<b>2.1236</b>	<b>0.0000</b>	<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>			<b>1,448.4496</b>

### 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	1.6013	19.7471	23.6283	0.0511	1.2028	0.2335	1.4363	0.3288	0.2147	0.5435		5,054.6236	5,054.6236	0.0344			5,055.3455
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	0.0305	0.0520	0.4406	7.9000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		63.5818	63.5818	3.7000e-003			63.6595
<b>Total</b>	<b>1.6319</b>	<b>19.7991</b>	<b>24.0689</b>	<b>0.0519</b>	<b>1.2776</b>	<b>0.2340</b>	<b>1.5117</b>	<b>0.3486</b>	<b>0.2152</b>	<b>0.5639</b>		<b>5,118.2054</b>	<b>5,118.2054</b>	<b>0.0381</b>			<b>5,119.0050</b>

### 3.3 Building Construction - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268			2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>		<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>			<b>2,043.2497</b>

#### 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	0.0449	0.2698	0.6742	6.1000e-004	0.0166	3.4500e-003	0.0201	4.7300e-003	3.1700e-003	7.9000e-003		59.9492	59.9492	5.0000e-004		59.9597
Worker	0.0916	0.1559	1.3218	2.3800e-003	0.2245	1.5800e-003	0.2261	0.0595	1.4500e-003	0.0610		190.7455	190.7455	0.0111		190.9786
<b>Total</b>	<b>0.1364</b>	<b>0.4257</b>	<b>1.9960</b>	<b>2.9900e-003</b>	<b>0.2411</b>	<b>5.0300e-003</b>	<b>0.2462</b>	<b>0.0643</b>	<b>4.6200e-003</b>	<b>0.0689</b>		<b>250.6947</b>	<b>250.6947</b>	<b>0.0116</b>		<b>250.9383</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>	<b>0.0000</b>	<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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	0.0449	0.2698	0.6742	6.1000e-004	0.0166	3.4500e-003	0.0201	4.7300e-003	3.1700e-003	7.9000e-003		59.9492	59.9492	5.0000e-004		59.9597
Worker	0.0916	0.1559	1.3218	2.3800e-003	0.2245	1.5800e-003	0.2261	0.0595	1.4500e-003	0.0610		190.7455	190.7455	0.0111		190.9786
<b>Total</b>	<b>0.1364</b>	<b>0.4257</b>	<b>1.9960</b>	<b>2.9900e-003</b>	<b>0.2411</b>	<b>5.0300e-003</b>	<b>0.2462</b>	<b>0.0643</b>	<b>4.6200e-003</b>	<b>0.0689</b>		<b>250.6947</b>	<b>250.6947</b>	<b>0.0116</b>		<b>250.9383</b>

### 3.4 Paving - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052			1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>			<b>1,356.1677</b>

#### 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	0.0534	0.0909	0.7711	1.3900e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		111.2682	111.2682	6.4700e-003			111.4042
<b>Total</b>	<b>0.0534</b>	<b>0.0909</b>	<b>0.7711</b>	<b>1.3900e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>111.2682</b>	<b>111.2682</b>	<b>6.4700e-003</b>			<b>111.4042</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052			1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000



Total	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
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**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	0.0534	0.0909	0.7711	1.3900e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		111.2682	111.2682	6.4700e-003		111.4042
<b>Total</b>	<b>0.0534</b>	<b>0.0909</b>	<b>0.7711</b>	<b>1.3900e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>111.2682</b>	<b>111.2682</b>	<b>6.4700e-003</b>		<b>111.4042</b>

**3.5 Architectural Coating - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.3827					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>55.7150</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**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	0.0229	0.0390	0.3305	6.0000e-004	0.0561	4.0000e-004	0.0565	0.0149	3.6000e-004	0.0153		47.6864	47.6864	2.7700e-003		47.7446
<b>Total</b>	<b>0.0229</b>	<b>0.0390</b>	<b>0.3305</b>	<b>6.0000e-004</b>	<b>0.0561</b>	<b>4.0000e-004</b>	<b>0.0565</b>	<b>0.0149</b>	<b>3.6000e-004</b>	<b>0.0153</b>		<b>47.6864</b>	<b>47.6864</b>	<b>2.7700e-003</b>		<b>47.7446</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	55.3827					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>55.7150</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**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	0.0229	0.0390	0.3305	6.0000e-004	0.0561	4.0000e-004	0.0565	0.0149	3.6000e-004	0.0153		47.6864	47.6864	2.7700e-003		47.7446
<b>Total</b>	<b>0.0229</b>	<b>0.0390</b>	<b>0.3305</b>	<b>6.0000e-004</b>	<b>0.0561</b>	<b>4.0000e-004</b>	<b>0.0565</b>	<b>0.0149</b>	<b>3.6000e-004</b>	<b>0.0153</b>		<b>47.6864</b>	<b>47.6864</b>	<b>2.7700e-003</b>		<b>47.7446</b>



**Westar Final Phase - Residential Construction**  
**Santa Barbara-South of Santa Ynez Range County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.42	Acre	0.42	0.00	0
Apartments Mid Rise	33.00	Dwelling Unit	1.42	44,255.00	90

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	37
<b>Climate Zone</b>	8	<b>Operational Year</b>	2016		
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

- Land Use - Development of 33 apartment units totaling 44,255 square feet and a 0.42 acre park area on a 1.84 acre site.
- Construction Phase - Default phasing assumed except for grading phase which would last 12 days.
- Off-road Equipment - Default construction equipment assumed.
- Off-road Equipment - Default construction equipment assumed.
- Off-road Equipment - Default construction equipment assumed.
- Off-road Equipment - Default construction equipment assumed.
- Trips and VMT - 834 total trucks over haul period.
- Grading - Export of 7,500 cubic yards of soil.
- Architectural Coating - Comply with SBCAPCD's Rule 323.
- Construction Off-road Equipment Mitigation - Water exposed surface areas twice daily. Reduce vehicle speeds to 15 mph.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblConstructionPhase	NumDays	4.00	12.00
tblGrading	MaterialExported	0.00	7,500.00
tblLandUse	LandUseSquareFeet	18,295.20	0.00
tblLandUse	LandUseSquareFeet	33,000.00	44,255.00
tblLandUse	LotAcreage	0.87	1.42
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	938.00	834.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

## 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					
2017	55.7360	39.0984	31.8928	0.0660	6.2841	1.2993	7.5835	2.8882	1.1953	4.0835	0.0000	6,570.9816	6,570.9816	0.4786	0.0000	6,581.0311
<b>Total</b>	<b>55.7360</b>	<b>39.0984</b>	<b>31.8928</b>	<b>0.0660</b>	<b>6.2841</b>	<b>1.2993</b>	<b>7.5835</b>	<b>2.8882</b>	<b>1.1953</b>	<b>4.0835</b>	<b>0.0000</b>	<b>6,570.9816</b>	<b>6,570.9816</b>	<b>0.4786</b>	<b>0.0000</b>	<b>6,581.0311</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					
2017	55.7360	39.0984	31.8928	0.0660	3.5306	1.2993	4.8299	1.4914	1.1953	2.6867	0.0000	6,570.9816	6,570.9816	0.4786	0.0000	6,581.0311
<b>Total</b>	<b>55.7360</b>	<b>39.0984</b>	<b>31.8928</b>	<b>0.0660</b>	<b>3.5306</b>	<b>1.2993</b>	<b>4.8299</b>	<b>1.4914</b>	<b>1.1953</b>	<b>2.6867</b>	<b>0.0000</b>	<b>6,570.9816</b>	<b>6,570.9816</b>	<b>0.4786</b>	<b>0.0000</b>	<b>6,581.0311</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	43.82	0.00	36.31	48.36	0.00	34.21	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading/Soil Export/Hauling	Grading	1/1/2017	1/17/2017	5	12	
2	Building Construction	Building Construction	1/18/2017	10/24/2017	5	200	
3	Paving	Paving	10/25/2017	11/7/2017	5	10	
4	Architectural Coating	Architectural Coating	11/8/2017	11/21/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 89,616; Residential Outdoor: 29,872; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading/Soil Export/Hauling	Graders	1	6.00	174	0.41
Grading/Soil Export/Hauling	Rubber Tired Dozers	1	6.00	255	0.40
Grading/Soil Export/Hauling	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading/Soil Export/Hauling	3	8.00	0.00	834.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	4.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	14.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	12.30	4.60	20.00	LD_Mix	HDT_Mix	HHDT



### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Grading/Soil Export/Hauling - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					5.0065	0.0000	5.0065	2.5396	0.0000	2.5396			0.0000				0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410			1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>5.0065</b>	<b>1.0661</b>	<b>6.0726</b>	<b>2.5396</b>	<b>0.9808</b>	<b>3.5204</b>		<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>			<b>1,448.4496</b>

#### 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	1.3894	19.2640	18.2933	0.0512	1.2028	0.2327	1.4355	0.3288	0.2140	0.5428		5,066.7051	5,066.7051	0.0339			5,067.4166
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	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003			65.1648
<b>Total</b>	<b>1.4174</b>	<b>19.3095</b>	<b>18.7142</b>	<b>0.0520</b>	<b>1.2776</b>	<b>0.2332</b>	<b>1.5108</b>	<b>0.3486</b>	<b>0.2145</b>	<b>0.5631</b>		<b>5,131.7922</b>	<b>5,131.7922</b>	<b>0.0376</b>			<b>5,132.5814</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
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Category	lb/day										lb/day					
Fugitive Dust					2.2529	0.0000	2.2529	1.1428	0.0000	1.1428			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
<b>Total</b>	<b>1.8844</b>	<b>19.7889</b>	<b>13.1786</b>	<b>0.0141</b>	<b>2.2529</b>	<b>1.0661</b>	<b>3.3190</b>	<b>1.1428</b>	<b>0.9808</b>	<b>2.1236</b>	<b>0.0000</b>	<b>1,439.1894</b>	<b>1,439.1894</b>	<b>0.4410</b>		<b>1,448.4496</b>

**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	1.3894	19.2640	18.2933	0.0512	1.2028	0.2327	1.4355	0.3288	0.2140	0.5428		5,066.7051	5,066.7051	0.0339		5,067.4166
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	0.0280	0.0455	0.4209	8.1000e-004	0.0748	5.3000e-004	0.0754	0.0199	4.8000e-004	0.0203		65.0871	65.0871	3.7000e-003		65.1648
<b>Total</b>	<b>1.4174</b>	<b>19.3095</b>	<b>18.7142</b>	<b>0.0520</b>	<b>1.2776</b>	<b>0.2332</b>	<b>1.5108</b>	<b>0.3486</b>	<b>0.2145</b>	<b>0.5631</b>		<b>5,131.7922</b>	<b>5,131.7922</b>	<b>0.0376</b>		<b>5,132.5814</b>

**3.3 Building Construction - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>		<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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
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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	0.0362	0.2659	0.4698	6.2000e-004	0.0166	3.3800e-003	0.0200	4.7300e-003	3.1100e-003	7.8400e-003		60.6690	60.6690	4.8000e-004		60.6791
Worker	0.0840	0.1364	1.2628	2.4400e-003	0.2245	1.5800e-003	0.2261	0.0595	1.4500e-003	0.0610		195.2612	195.2612	0.0111		195.4943
<b>Total</b>	<b>0.1203</b>	<b>0.4023</b>	<b>1.7326</b>	<b>3.0600e-003</b>	<b>0.2411</b>	<b>4.9600e-003</b>	<b>0.2461</b>	<b>0.0643</b>	<b>4.5600e-003</b>	<b>0.0688</b>		<b>255.9302</b>	<b>255.9302</b>	<b>0.0116</b>		<b>256.1734</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.3110</b>	<b>0.0220</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>	<b>0.0000</b>	<b>2,034.2860</b>	<b>2,034.2860</b>	<b>0.4268</b>		<b>2,043.2497</b>

**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	0.0362	0.2659	0.4698	6.2000e-004	0.0166	3.3800e-003	0.0200	4.7300e-003	3.1100e-003	7.8400e-003		60.6690	60.6690	4.8000e-004		60.6791
Worker	0.0840	0.1364	1.2628	2.4400e-003	0.2245	1.5800e-003	0.2261	0.0595	1.4500e-003	0.0610		195.2612	195.2612	0.0111		195.4943
<b>Total</b>	<b>0.1203</b>	<b>0.4023</b>	<b>1.7326</b>	<b>3.0600e-003</b>	<b>0.2411</b>	<b>4.9600e-003</b>	<b>0.2461</b>	<b>0.0643</b>	<b>4.5600e-003</b>	<b>0.0688</b>		<b>255.9302</b>	<b>255.9302</b>	<b>0.0116</b>		<b>256.1734</b>

**3.4 Paving - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>		<b>1,356.1677</b>

**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	0.0490	0.0796	0.7366	1.4200e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		113.9024	113.9024	6.4700e-003		114.0383
<b>Total</b>	<b>0.0490</b>	<b>0.0796</b>	<b>0.7366</b>	<b>1.4200e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>113.9024</b>	<b>113.9024</b>	<b>6.4700e-003</b>		<b>114.0383</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>	<b>0.0000</b>	<b>1,347.6575</b>	<b>1,347.6575</b>	<b>0.4052</b>		<b>1,356.1677</b>



**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	0.0490	0.0796	0.7366	1.4200e-003	0.1310	9.2000e-004	0.1319	0.0347	8.5000e-004	0.0356		113.9024	113.9024	6.4700e-003		114.0383
<b>Total</b>	<b>0.0490</b>	<b>0.0796</b>	<b>0.7366</b>	<b>1.4200e-003</b>	<b>0.1310</b>	<b>9.2000e-004</b>	<b>0.1319</b>	<b>0.0347</b>	<b>8.5000e-004</b>	<b>0.0356</b>		<b>113.9024</b>	<b>113.9024</b>	<b>6.4700e-003</b>		<b>114.0383</b>

**3.5 Architectural Coating - 2017**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.3827					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>55.7150</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**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	0.0210	0.0341	0.3157	6.1000e-004	0.0561	4.0000e-004	0.0565	0.0149	3.6000e-004	0.0153		48.8153	48.8153	2.7700e-003		48.8736

Total	0.0210	0.0341	0.3157	6.1000e-004	0.0561	4.0000e-004	0.0565	0.0149	3.6000e-004	0.0153		48.8153	48.8153	2.7700e-003		48.8736
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**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	55.3827					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
<b>Total</b>	<b>55.7150</b>	<b>2.1850</b>	<b>1.8681</b>	<b>2.9700e-003</b>		<b>0.1733</b>	<b>0.1733</b>		<b>0.1733</b>	<b>0.1733</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0297</b>		<b>282.0721</b>

**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	0.0210	0.0341	0.3157	6.1000e-004	0.0561	4.0000e-004	0.0565	0.0149	3.6000e-004	0.0153		48.8153	48.8153	2.7700e-003		48.8736