

Appendix C:
The Combined Annual Emission Reports

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\Owner\AppData\Roaming\Urbemis\Version9a\Projects\Proctor Road TTM 8053 24-lot Residential.urb924

Project Name: Proctor Road TTM 8053 24-lot Residential

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2007 TOTALS (tons/year unmitigated)	0.04	0.35	0.18	0.00	0.32	0.02	0.34	0.07	0.02	0.08	27.47
2007 TOTALS (tons/year mitigated)	0.04	0.35	0.18	0.00	0.32	0.02	0.34	0.07	0.02	0.08	27.47
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008 TOTALS (tons/year unmitigated)	1.00	1.75	1.50	0.00	0.13	0.12	0.26	0.03	0.11	0.14	184.66
2008 TOTALS (tons/year mitigated)	1.00	1.75	1.50	0.00	0.13	0.12	0.26	0.03	0.11	0.14	184.66
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.27	0.05	0.02	0.00	0.00	0.00	70.06
TOTALS (tons/year, mitigated)	0.27	0.05	0.02	0.00	0.00	0.00	70.06
Percent Reduction	0.00	0.00	0.00	NaN	NaN	NaN	0.00

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.25	0.32	2.82	0.00	0.51	0.10	283.02
TOTALS (tons/year, mitigated)	0.25	0.32	2.82	0.00	0.51	0.10	283.02
Percent Reduction	0.00	0.00	0.00	NaN	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.52	0.37	2.84	0.00	0.51	0.10	353.08
TOTALS (tons/year, mitigated)	0.52	0.37	2.84	0.00	0.51	0.10	353.08
Percent Reduction	0.00	0.00	0.00	NaN	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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2008		1.00	1.75	1.50	0.00	0.13	0.12	0.26	0.03	0.11	0.14	184.66
Asphalt 12/28/2007-01/11/2008		0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	7.35
Paving Off-Gas		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel		0.01	0.08	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.72
Paving On Road Diesel		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
Paving Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
Fine Grading 11/30/2007-01/11/2008		0.02	0.13	0.07	0.00	0.13	0.01	0.14	0.03	0.01	0.03	10.57
Fine Grading Dust		0.00	0.00	0.00	0.00	0.13	0.00	0.13	0.03	0.00	0.03	0.00
Fine Grading Off Road Diesel		0.01	0.13	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	10.11
Fine Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
Building 01/11/2008-08/22/2008		0.34	1.53	1.36	0.00	0.00	0.11	0.11	0.00	0.10	0.10	166.00
Building Off Road Diesel		0.33	1.47	0.95	0.00	0.00	0.11	0.11	0.00	0.10	0.10	130.51
Building Vendor Trips		0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.16
Building Worker Trips		0.01	0.02	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.34
Coating 08/08/2008-09/05/2008		0.62	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
Architectural Coating		0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74

Phase Assumptions

Phase: Fine Grading 11/30/2007 - 1/11/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 5.85

Maximum Daily Acreage Disturbed: 1.46

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

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On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2007 - 1/11/2008 - Default Paving Description

Acres to be Paved: 1.46

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 1/11/2008 - 8/22/2008 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 8/8/2008 - 9/5/2008 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

2008		1.00	1.75	1.50	0.00	0.13	0.12	0.26	0.03	0.11	0.14	184.66
Asphalt 12/28/2007-01/11/2008		0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	7.35
Paving Off-Gas		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel		0.01	0.08	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.72
Paving On Road Diesel		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
Paving Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
Fine Grading 11/30/2007-01/11/2008		0.02	0.13	0.07	0.00	0.13	0.01	0.14	0.03	0.01	0.03	10.57
Fine Grading Dust		0.00	0.00	0.00	0.00	0.13	0.00	0.13	0.03	0.00	0.03	0.00
Fine Grading Off Road Diesel		0.01	0.13	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	10.11
Fine Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
Building 01/11/2008-08/22/2008		0.34	1.53	1.36	0.00	0.00	0.11	0.11	0.00	0.10	0.10	166.00
Building Off Road Diesel		0.33	1.47	0.95	0.00	0.00	0.11	0.11	0.00	0.10	0.10	130.51
Building Vendor Trips		0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.16
Building Worker Trips		0.01	0.02	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.34
Coating 08/08/2008-09/05/2008		0.62	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
Architectural Coating		0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips		0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74

Construction Related Mitigation Measures

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.05	0.02	0.00	0.00	0.00	70.06
Hearth							
Landscape							
Consumer Products	0.21						
Architectural Coatings	0.06						
TOTALS (tons/year, unmitigated)	0.27	0.05	0.02	0.00	0.00	0.00	70.06

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.05	0.02	0.00	0.00	0.00	70.06
Hearth							
Landscape							
Consumer Products	0.21						
Architectural Coatings	0.06						
TOTALS (tons/year, mitigated)	0.27	0.05	0.02	0.00	0.00	0.00	70.06

Area Source Mitigation Measures Selected

Mitigation Description Percent Reduction

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.25	0.32	2.82	0.00	0.51	0.10	283.02
TOTALS (tons/year, unmitigated)	0.25	0.32	2.82	0.00	0.51	0.10	283.02

Operational Settings:

Includes correction for passby trips

Includes the following double counting adjustment for internal trips:

Residential Trip % Reduction: 0.00 Nonresidential Trip % Reduction: 0.00

Analysis Year: 2013 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	5.85	9.11 dwelling units		24.00	218.64	1,636.58
					218.64	1,636.58

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.5	0.6	99.2	0.2
Light Truck < 3750 lbs	12.3	0.8	96.8	2.4
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.3	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.7	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	55.2	44.8	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Users\Owner\AppData\Roaming\Urbemis\Version9a\Projects\Proctor Road TTM 8053 24-lot Residential.urb924

Project Name: Proctor Road TTM 8053 24-lot Residential

Project Location: Alameda County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2007 TOTALS (lbs/day unmitigated)	7.27	50.03	28.55	0.00	29.22	3.16	32.38	6.11	2.90	9.01	3,983.29
2007 TOTALS (lbs/day mitigated)	7.27	50.03	28.55	0.00	29.22	3.16	32.38	6.11	2.90	9.01	3,983.29
2008 TOTALS (lbs/day unmitigated)	63.80	66.37	44.42	0.01	29.24	4.37	33.61	6.11	4.02	10.13	6,045.39
2008 TOTALS (lbs/day mitigated)	63.80	66.37	44.42	0.01	29.24	4.37	33.61	6.11	4.02	10.13	6,045.39

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	1.53	0.30	0.13	0.00	0.00	0.00	383.90
TOTALS (lbs/day, mitigated)	1.53	0.30	0.13	0.00	0.00	0.00	383.90
Percent Reduction	0.00	0.00	0.00	NaN	NaN	NaN	0.00

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Time Slice 12/28/2007-12/31/2007 Active Days: 2	<u>7.27</u>	<u>50.03</u>	<u>28.55</u>	<u>0.00</u>	<u>29.22</u>	<u>3.16</u>	<u>32.38</u>	<u>6.11</u>	<u>2.90</u>	<u>9.01</u>	<u>3,983.29</u>
Asphalt 12/28/2007-01/11/2008	3.70	20.30	12.91	0.00	0.02	1.67	1.68	0.01	1.53	1.54	1,634.13
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.17	18.72	9.52	0.00	0.00	1.60	1.60	0.00	1.48	1.48	1,272.04
Paving On Road Diesel	0.08	1.41	0.45	0.00	0.01	0.06	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.10	0.17	2.93	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.68
Fine Grading 11/30/2007-01/11/2008	3.57	29.73	15.64	0.00	29.20	1.49	30.70	6.10	1.37	7.47	2,349.16
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.52	29.64	14.18	0.00	0.00	1.49	1.49	0.00	1.37	1.37	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.47	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.84
Time Slice 1/1/2008-1/10/2008 Active Days: 8	6.87	47.33	27.49	0.00	29.22	3.01	32.23	6.11	2.77	8.87	3,983.31
Asphalt 12/28/2007-01/11/2008	3.51	19.25	12.56	0.00	0.02	1.59	1.61	0.01	1.46	1.47	1,634.15
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.99	17.76	9.40	0.00	0.00	1.54	1.54	0.00	1.41	1.41	1,272.04
Paving On Road Diesel	0.08	1.33	0.42	0.00	0.01	0.05	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.09	0.16	2.74	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.70
Fine Grading 11/30/2007-01/11/2008	3.36	28.08	14.93	0.00	29.20	1.41	30.62	6.10	1.30	7.40	2,349.17
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.37	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.85

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Time Slice	11.15	66.37	44.42	0.01	29.24	4.37	33.61	6.11	4.02	10.13	6,045.39
Active Days: 1											
Asphalt 12/28/2007-01/11/2008	3.51	19.25	12.56	0.00	0.02	1.59	1.61	0.01	1.46	1.47	1,634.15
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.99	17.76	9.40	0.00	0.00	1.54	1.54	0.00	1.41	1.41	1,272.04
Paving On Road Diesel	0.08	1.33	0.42	0.00	0.01	0.05	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.09	0.16	2.74	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.70
Building 01/11/2008-08/22/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89
Building Worker Trips	0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99
Fine Grading 11/30/2007-01/11/2008	3.36	28.08	14.93	0.00	29.20	1.41	30.62	6.10	1.30	7.40	2,349.17
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.37	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.85
Time Slice 1/14/2008-8/7/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Active Days: 149											
Building 01/11/2008-08/22/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89
Building Worker Trips	0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99

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Time Slice 8/8/2008-8/22/2008 Active Days: 11	63.80	19.10	17.88	0.00	0.02	1.36	1.39	0.01	1.25	1.26	2,132.79
Building 01/11/2008-08/22/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89
Building Worker Trips	0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99
Coating 08/08/2008-09/05/2008	59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71
Architectural Coating	59.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71
Time Slice 8/25/2008-9/5/2008 Active Days: 10	59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71
Coating 08/08/2008-09/05/2008	59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71
Architectural Coating	59.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71

Phase Assumptions

- Phase: Fine Grading 11/30/2007 - 1/11/2008 - Default Fine Site Grading Description
 Total Acres Disturbed: 5.85
 Maximum Daily Acreage Disturbed: 1.46
 Fugitive Dust Level of Detail: Default
 20 lbs per acre-day
 On Road Truck Travel (VMT): 0
 Off-Road Equipment:
 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Phase: Paving 12/28/2007 - 1/11/2008 - Default Paving Description

Acres to be Paved: 1.46

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 1/1/2008 - 8/22/2008 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 8/8/2008 - 9/5/2008 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

ROG

NOx

CO

SO2

PM10 Dust

PM10 Exhaust

PM2.5 Dust

PM2.5 Exhaust

PM2.5

CO2

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Time Slice 11/30/2007-12/27/2007 Active Days: 20	3.57	29.73	15.64	0.00	29.20	1.49	30.70	6.10	1.37	7.47	2,349.16
Fine Grading 11/30/2007- 01/11/2008	3.57	29.73	15.64	0.00	29.20	1.49	30.70	6.10	1.37	7.47	2,349.16
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.52	29.64	14.18	0.00	0.00	1.49	1.49	0.00	1.37	1.37	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.47	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.84
Time Slice 12/28/2007-12/31/2007 Active Days: 2	<u>7.27</u>	<u>50.03</u>	<u>28.55</u>	<u>0.00</u>	<u>29.22</u>	<u>3.16</u>	<u>32.38</u>	<u>6.11</u>	<u>2.90</u>	<u>9.01</u>	<u>3,983.29</u>
Asphalt 12/28/2007-01/11/2008	3.70	20.30	12.91	0.00	0.02	1.67	1.68	0.01	1.53	1.54	1,634.13
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.17	18.72	9.52	0.00	0.00	1.60	1.60	0.00	1.48	1.48	1,272.04
Paving On Road Diesel	0.08	1.41	0.45	0.00	0.01	0.06	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.10	0.17	2.93	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.68
Fine Grading 11/30/2007- 01/11/2008	3.57	29.73	15.64	0.00	29.20	1.49	30.70	6.10	1.37	7.47	2,349.16
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.52	29.64	14.18	0.00	0.00	1.49	1.49	0.00	1.37	1.37	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.47	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.84

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Time Slice 1/1/2008-1/10/2008 Active Days: 8	6.87	47.33	27.49	0.00	29.22	3.01	32.23	6.11	2.77	8.87	3,983.31
Asphalt 12/28/2007-01/11/2008	3.51	19.25	12.56	0.00	0.02	1.59	1.61	0.01	1.46	1.47	1,634.15
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.99	17.76	9.40	0.00	0.00	1.54	1.54	0.00	1.41	1.41	1,272.04
Paving On Road Diesel	0.08	1.33	0.42	0.00	0.01	0.05	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.09	0.16	2.74	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.70
Fine Grading 11/30/2007-01/11/2008	3.36	28.08	14.93	0.00	29.20	1.41	30.62	6.10	1.30	7.40	2,349.17
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.37	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.85

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Time Slice	11.15	66.37	44.42	0.01	29.24	4.37	33.61	6.11	4.02	10.13	6,045.39
Active Days: 1											
Asphalt 12/28/2007-01/11/2008	3.51	19.25	12.56	0.00	0.02	1.59	1.61	0.01	1.46	1.47	1,634.15
Paving Off-Gas	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.99	17.76	9.40	0.00	0.00	1.54	1.54	0.00	1.41	1.41	1,272.04
Paving On Road Diesel	0.08	1.33	0.42	0.00	0.01	0.05	0.06	0.00	0.05	0.05	158.41
Paving Worker Trips	0.09	0.16	2.74	0.00	0.01	0.01	0.02	0.00	0.00	0.01	203.70
Building 01/11/2008-08/22/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89
Building Worker Trips	0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99
Fine Grading 11/30/2007-01/11/2008	3.36	28.08	14.93	0.00	29.20	1.41	30.62	6.10	1.30	7.40	2,349.17
Fine Grading Dust	0.00	0.00	0.00	0.00	29.20	0.00	29.20	6.10	0.00	6.10	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.37	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.85
Time Slice 1/14/2008-8/7/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Active Days: 149											
Building 01/11/2008-08/22/2008	4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89
Building Worker Trips	0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99

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Time Slice	Active Days	ROG	NOx	CO	SO2	PM10	PM2.5	CO2						
8/8/2008-8/22/2008	11	63.80	19.10	17.88	0.00	0.02	1.36	1.39	0.01	1.25	1.26	2,132.79		
Building 01/11/2008-08/22/2008		4.27	19.05	16.93	0.00	0.02	1.36	1.38	0.01	1.25	1.26	2,062.08		
Building Off Road Diesel		4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20		
Building Vendor Trips		0.04	0.55	0.39	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.89		
Building Worker Trips		0.16	0.28	4.74	0.00	0.02	0.01	0.03	0.01	0.01	0.01	351.99		
Coating 08/08/2008-09/05/2008		59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71		
Architectural Coating		59.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coating Worker Trips		0.03	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71		
Time Slice 8/25/2008-9/5/2008	10	59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71		
Coating 08/08/2008-09/05/2008		59.52	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71		
Architectural Coating		59.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coating Worker Trips		0.03	0.06	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	70.71		

Construction Related Mitigation Measures

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.30	0.13	0.00	0.00	0.00	383.90
Hearth							
Landscape							
Consumer Products	1.17						
Architectural Coatings	0.34						
TOTALS (lbs/day, unmitigated)	1.53	0.30	0.13	0.00	0.00	0.00	383.90

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.02	0.30	0.13	0.00	0.00	0.00	383.90
Hearth							
Landscapes							
Consumer Products	1.17						
Architectural Coatings	0.34						
TOTALS (lbs/day, mitigated)	1.53	0.30	0.13	0.00	0.00	0.00	383.90

Area Source Mitigation Measures Selected

Mitigation Description Percent Reduction

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	1.39	2.26	16.03	0.01	2.82	0.54	1,407.14
TOTALS (lbs/day, unmitigated)	1.39	2.26	16.03	0.01	2.82	0.54	1,407.14

Operational Settings:

Includes correction for passby trips

Includes the following double counting adjustment for internal trips:

Residential Trip % Reduction: 0.00 Nonresidential Trip % Reduction: 0.00

Analysis Year: 2013 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	5.85	9.11 dwelling units		24.00	218.64	1,636.58
					218.64	1,636.58

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.5	0.6	99.2	0.2
Light Truck < 3750 lbs	12.3	0.8	96.8	2.4
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.3	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.3	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.7	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	55.2	44.8	0.0
School Bus	0.0	0.0	0.0	0.0
Motor Home	0.6	0.0	83.3	16.7

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

TOTALS (lbs/day, unmitigated)

TOTALS (lbs/day, mitigated)

Percent Reduction

2.87	1.84	15.29	0.02	2.82	0.54	2,006.50
2.87	1.84	15.29	0.02	2.82	0.54	2,006.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00

CO2

3,983.29

3,983.29

6,045.39

6,045.39