APPENDIX M

AIR QUALITY TABLES

EMISSIONS SUMMARY TABLES

Table 1
Construction and Operational Emissions Summary
Project 1 - Residential Heavy
Point Molate, Richmond, CA

Point Molate Project, Residential-Heavy, Full Buildout (2024)													
Construction Emissions													
Source Category[1]	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Project Construction[2,3]	15	28	44	0.18	0.24	0.22	2.8	5.2	8.1	0.033	0.043	0.041	3,068
WWTP Construction[2,4]	0.17	1.9	6.6	0.017	0.017	0.017	5.0E-04	0.0056	0.020	5.0E-05	5.0E-05	5.0E-05	4.4
Total[5]	**15**	**30**	**51**	**0.20**	**0.26**	**0.24**	**2.8**	**5.2**	**8.1**	**0.033**	**0.044**	**0.041**	**3,073**
Total (without on-site WWTP)[5]	**15**	**28**	**44**	**0.18**	**0.24**	**0.22**	**2.8**	**5.2**	**8.1**	**0.033**	**0.043**	**0.041**	**3,068**
BAAQMD Emissions Threshold	54	54	-	-	82	54	-	-	-	-	-	-	-
Above Threshold?	No	No	N/A	N/A	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unmitigated Operational Emissions													
Area[6]	45	0.71	0.31	0.0045	0.058	0.058	8.2	0.13	0.056	8.3E-04	0.011	0.011	151
Energy - Electricity[7,8]	0	0	0	0	0	0	0	0	0	0	0	0	884
Energy - Natural Gas[7]	0.84	7.2	3.5	0.046	0.58	0.58	0.15	1.3	0.63	0.0083	0.11	0.11	1,517
Mobile[9]	16	33	165	0.49	29	8.4	2.9	6.0	30	0.089	5.3	1.5	8,256
Stationary	0.18	0.59	3.1	0.0058	0.024	0.024	0.032	0.11	0.56	0.0011	0.0043	0.0043	102
Waste	0	0	0	0	0	0	0	0	0	0	0	0	603
Water[8]	0	0	0	0	0	0	0	0	0	0	0	0	299
Ferry[10]	3.3	23	14	0.015	0.83	0.83	0.61	4.2	2.6	0.0028	0.15	0.15	477
WWTP[11]	0.29	0.50	2.1	0.0051	0.12	0.046	0.054	0.090	0.39	9.3E-04	0.022	0.0084	257
Total (with on-site WWTP)[5]	**65**	**65**	**189**	**0.57**	**30**	**10**	**12**	**12**	**34**	**0.10**	**5.6**	**1.8**	**12,545**
Above Threshold with on-site WWTP?	Yes	Yes	N/A	N/A	No	No	Yes	Yes	N/A	N/A	No	No	N/A
Water (without reclaimed outdoor water)	0	0	0	0	0	0	0	0	0	0	0	0	312
Total (without on-site WWTP)[5]	**65**	**65**	**187**	**0.56**	**30**	**10**	**12**	**12**	**34**	**0.10**	**5.5**	**1.8**	**12,302**
Above Threshold without on-site WWTP?	Yes	Yes	N/A	N/A	No	No	Yes	Yes	N/A	N/A	No	No	N/A
BAAQMD Emissions Threshold	54	54	-	-	82	54	10	10	-	-	15	10	-
Mitigated Operational Emissions													
Source Category	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Area[12]	37	0.71	0.31	0.0045	0.058	0.058	6.7	0.13	0.056	8.3E-04	0.011	0.011	151
Energy - Electricity[7,13]	0	0	0	0	0	0	0	0	0	0	0	0	867
Energy - Natural Gas[7]	0.84	7.2	3.5	0.046	0.58	0.58	0.15	1.3	0.63	0.0083	0.11	0.11	1,517
Mobile[9,14]	14	28	139	0.41	25	7.3	2.5	5.1	25	0.075	4.6	1.3	6,951
Stationary	0.18	0.59	3.1	0.0058	0.024	0.024	0.032	0.11	0.56	0.0011	0.0043	0.0043	102
Waste[15]	0	0	0	0	0	0	0	0	0	0	0	0	301
Water[8,16]	0	0	0	0	0	0	0	0	0	0	0	0	243
Ferry[10]	0.78	14	14	0.015	0.17	0.17	0.14	2.6	2.6	0.0028	0.030	0.030	477
WWTP[11]	0.29	0.50	2.1	0.0051	0.12	0.046	0.054	0.090	0.39	9.3E-04	0.022	0.0084	257
Total (with on-site WWTP)[5]	**52**	**52**	**162**	**0.49**	**26**	**8.2**	**10**	**9.4**	**30**	**0.089**	**4.7**	**1.5**	**10,866**
Above Threshold with on-site WWTP?	No	No	N/A	N/A	No	No	No	No	N/A	N/A	No	No	N/A
Water (without reclaimed outdoor water)	0	0	0	0	0	0	0	0	0	0	0	0	257
Total (without on-site WWTP)[5]	**52**	**51**	**160**	**0.48**	**26**	**8.2**	**10**	**9.3**	**29**	**0.088**	**4.7**	**1.5**	**10,623**
Above Threshold without on-site WWTP?	No	No	N/A	N/A	No	No	No	No	N/A	N/A	No	No	N/A
BAAQMD Emissions Threshold	54	54	-	-	82	54	10	10	-	-	15	10	-
Reductions													
Mitigation Measure	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Area - Super-compliant VOC Paints (Interior/Exterior)	8.1	0	0	0	0	0	1.5	0	0	0	0	0	0
Energy - Energy Efficient Appliances	0	0	0	0	0	0	0	0	0	0	0	0	17
Mobile - TDM	2.1	4.3	21	0.064	3.7	1.1	0.38	0.79	3.9	0.012	0.68	0.20	1,073
Mobile - EV Chargers	0.25	0.67	5.0	0.015	0.011	0.010	0.045	0.12	0.91	0.0028	0.0019	0.0018	232
Waste - 50% Waste Reduction	0	0	0	0	0	0	0	0	0	0	0	0	301
Water - Low Flow Faucets & Toilets	0	0	0	0	0	0	0	0	0	0	0	0	56
Ferry - Tier 4 Ferry Engines	2.5	8.9	0	0	0.66	0.66	0.47	1.6	0	0	0.12	0.12	0
Total[5]	**13**	**14**	**26**	**0.079**	**4.4**	**1.8**	**2.4**	**2.5**	**4.8**	**0.014**	**0.81**	**0.32**	**1,679**

Notes:

1. Land use types for the residential heavy scenario are summarized in Table A1.
2. Construction emissions for Project and WWTP, as well as operational emissions from Area, Energy, Mobile, Stationary, Waste and Water source categories are estimated using CalEEMod 2016.3.2. Construction emissions also conservatively include emissions from the Bay Trail construction within the Project site even though construction of the Bay Trail has already been approved.
3. Project construction emissions in lbs/day are calculated by dividing the total emissions (in tons) by the actual number of project construction days (2,859 days). Construction emissions were conservatively estimated assuming soil exported from the Project site will be hauled by trucks. The Project may also export soil using barges (pulled by tug boats). A comparison of emissions from haul trucks and tug boats are provided in Table A3, showing total emissions from tug boats would be lower than haul trucks.
4. WWTP construction emissions in lbs/day are calculated by dividing the total emissions (in tons) by the actual number of treatment plant construction days (6 days).
5. Sum totals may not add up exactly due to rounding.
6. Area emissions assume that 600 natural gas fireplaces will be installed with the Project, and that landscaping will be required for 10 acres of city park, as provided by the Project Sponsor. The consumer product VOC emission factor is specific to Contra Costa County for 2017. The emission factor is determined based on the following methodology - first, a reduction efficiency for VOC emissions for Contra Costa County was calculated based on the percent different for Contra Costa County relative to the 2008 VOC per capita emission factor for the entire state; the 2017 county specific emission factor was then calculated by applying this reduction to the 2017 statewide VOC emission factor, assuming that building square footage roughly scales with population and the percent reduction per capita stays the same (as in 2008).
7. Energy and Natural Gas usage for unmitigated emissions incorporate the 2019 Title 24 standards as a Project design feature. This includes the installation of solar on all single family and low-rise units, equivalent to offset the expected annual electricity usage. The Project also assumes, as a Project design feature, that 25% of all residential units will have no natural gas usage (75% will retain usage) and these units are assumed to be electrified (estimated natural gas usage was converted to electricity assuming an equivalent MMBTU conversion). Historical energy use rates are utilized in emission calculations for all historical buildings.
8. CalEEMod energy intensity factors for CO_2, CH_4, and N_2O are estimated from Pacific Gas & Electric Renewable Portfolio Standard (RPS) projections for the first operational year (partial buildout in 2024). For specifics regarding RPS projection estimates, see Table EF1.
9. Vehicle emissions estimated from CalEEMod are based on mobile trip rate inputs provided in the Project's Transportation Impact Analysis (TIA). Trip rates provided by the Project's TIA already account for a 20% internal trip reduction and a 10% reduction in trips due to TDM measures. Vehicle trip rates for the residential heavy scenario are summarized in Table A4.
10. Unmitigated ferry emissions are estimated using Tier 2 emission factors for all pollutants. Mitigated ferry emissions assume Tier 4 engine emission factors for ROG, NO_x, CO and PM. See Table A6 for additional details.
11. Operational emissions for the WWTP are estimated using CalEEMod, in additional to outside data sources. The WWTP system is defined as a 'General Light Industry' land use type in CalEEMod. However, the WWTP is not expected to have any area emissions from Consumer products and architectural coating; thus this value in the CalEEMod output table is not included here. Mobile emissions from brine trucks are estimated using EMFAC 2017 emission factors for HHDT, as shown in Table A7. VOC emissions from the WWTP are estimated using MDAQMD's default emission factor for activated sludge treatment systems, as shown in Table A8. Emissions from hauling sewage with trucks is included in Table A9. No mitigation measures are applied to WWTP emissions.
12. Mitigated area emissions are estimated assuming the use of "super-compliant" VOC architectural coating for residential and non-residential interior and exterior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113 (10 g/L).
13. Mitigated GHG emissions from electricity use are estimated by assuming energy-efficient appliances (Dishwashers, Clothes Washers, Fans and Refrigerators) for residential units and quality restaurants. CalEEMod default efficiency inputs are used for all appliances.
14. Mitigated mobile emissions are estimated by applying additional TDM measures which would lead to a 13% reduction in trip generation (for a total of 23% reduction due to TDM), as provided by the Project Sponsor. Mitigation measures to install Level 2 equivalent Residential EV Chargers in single family units and Commercial EV Chargers consistent with CalGreen Tier 1 standards would lead to further reduction in mobile emissions. Calculations of GHG and CAP emission reductions associated with the EV Chargers are provided Tables M1 - M4.
15. Mitigated waste emissions are estimated by assuming that the Project will institute recycling and composting services which would lead to a 50% reduction in solid waste.
16. Mitigated water use emissions are estimated by assuming that the Project will install low-flow bathroom faucets, low-flow kitchen faucets, low-flow toilets and low-flow showers. CalEEMod default efficiency inputs are used for all appliances.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod - California Emissions Estimator MODel
CO - Carbon Monoxide
CO2e - carbon dioxide equivalents
HHDT - Heavy Heavy Duty Trucks
lbs - pounds
MDAQMD - Mojave Desert Air Quality Management District
MT - Metric Tons
NOx - oxides of nitrogen
PM - Particulate Matter
ROG - reactive organic gases
SO2 - Sulfur dioxide
WWTP - Waste Water Treatment Plant

References:

California Air Resources Board Non-road Diesel Engine Certification Tier Chart. Available online at: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

CalEEMod® 2016.3.2 Available Online at: http://www.caleemod.com
Mojave Desert Air Quality Management District. Emissions Inventory Program. Available online at: http://www.mdaqmd.ca.gov/home/showdocument?id=790
South Coast Air Quality Management District. Super-Compliant Architectural Coatings. Available online at: http://www.aqmd.gov/home/rulescompliance/compliance/vocs/architectural-coatings/super-compliant-coatings

Table 2
Construction and Operational Emissions Summary
Project 2 - Commercial Heavy
Point Molate, Richmond, CA

Point Molate Project, Residential-Heavy, Full Buildout (2024)													
Construction Emissions													
Source Category[1]	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Project Construction[2,3]	13	29	41	0.17	0.23	0.22	2.4	5.2	7.5	0.031	0.042	0.040	2,885
WWTP Construction[2,4]	0.17	1.9	6.6	0.017	0.017	0.017	5.0E-04	0.0056	0.020	5.0E-05	5.0E-05	5.0E-05	4.4
Total[5]	**13**	**30**	**48**	**0.19**	**0.25**	**0.23**	**2.4**	**5.2**	**7.6**	**0.031**	**0.042**	**0.040**	**2,890**
Total (without on-site WWTP)	**13**	**29**	**41**	**0.17**	**0.23**	**0.22**	**2.4**	**5.2**	**7.5**	**0.031**	**0.042**	**0.040**	**2,885**
BAAQMD Emissions Threshold	54	54	-	-	82	54	-	-	-	-	-	-	-
Above Threshold?	No	No	N/A	N/A	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unmitigated Operational Emissions													
Area[6]	41	0.71	0.31	0.0045	0.058	0.058	7.4	0.13	0.056	8.3E-04	0.011	0.011	151
Energy - Electricity[7,8]	0	0	0	0	0	0	0	0	0	0	0	0	1,381
Energy - Natural Gas[7]	1.0	9.1	5.6	0.056	0.71	0.71	0.19	1.7	1.0	0.010	0.13	0.13	1,873
Mobile[9]	15	32	161	0.48	28	8.3	2.8	5.9	29	0.087	5.2	1.5	8,080
Stationary	0.18	0.59	3.1	0.0058	0.024	0.024	0.032	0.11	0.56	0.0011	0.0043	0.0043	102
Waste	0	0	0	0	0	0	0	0	0	0	0	0	705
Water[8]	0	0	0	0	0	0	0	0	0	0	0	0	417
Ferry[10]	3.3	23	14	0.015	0.83	0.83	0.61	4.2	2.6	0.0028	0.15	0.15	477
WWTP[11]	0.29	0.50	2.1	0.0051	0.12	0.046	0.054	0.090	0.39	9.3E-04	0.022	0.0084	257
Total (with on-site WWTP)[5]	**61**	**66**	**186**	**0.57**	**30**	**10**	**11**	**12**	**34**	**0.10**	**5.5**	**1.8**	**13,442**
Above Threshold with on-site WWTP?	Yes	Yes	N/A	N/A	No	No	Yes	Yes	N/A	N/A	No	No	N/A
Water (without reclaimed outdoor water)	0	0	0	0	0	0	0	0	0	0	0	0	436
Total (without on-site WWTP)[5]	**61**	**66**	**184**	**0.56**	**30**	**10**	**11**	**12**	**34**	**0.10**	**5.4**	**1.8**	**13,205**
Above Threshold without on-site WWTP?	Yes	Yes	N/A	N/A	No	No	Yes	Yes	N/A	N/A	No	No	N/A
BAAQMD Emissions Threshold	54	54	-	-	82	54	10	10	-	-	15	10	-
Mitigated Operational Emissions													
Source Category	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Area[12]	34	0.71	0.31	0.0045	0.058	0.058	6.1	0.13	0.056	8.3E-04	0.011	0.011	151
Energy - Electricity[7,13]	0	0	0	0	0	0	0	0	0	0	0	0	1,373
Energy - Natural Gas[7]	1.0	9.1	5.6	0.056	0.71	0.71	0.19	1.7	1.0	0.010	0.13	0.13	1,873
Mobile[9,14]	13	27	126	0.37	25	7.2	2.3	4.9	23	0.068	4.5	1.3	6,380
Stationary	0.18	0.59	3.1	0.0058	0.024	0.024	0.032	0.11	0.56	0.0011	0.0043	0.0043	102
Waste[15]	0	0	0	0	0	0	0	0	0	0	0	0	353
Water[8,16]	0	0	0	0	0	0	0	0	0	0	0	0	339
Ferry[10]	0.78	14	14	0.015	0.17	0.17	0.14	2.6	2.6	0.0028	0.030	0.030	477
WWTP[11]	0.29	0.50	2.1	0.0051	0.12	0.046	0.054	0.090	0.39	9.3E-04	0.022	0.0084	257
Total (with on-site WWTP)[5]	**49**	**52**	**151**	**0.46**	**26**	**8.2**	**8.9**	**9.5**	**28**	**0.084**	**4.7**	**1.5**	**11,304**
Above Threshold with on-site WWTP?	No	No	N/A	N/A	No	No	No	No	N/A	N/A	No	No	N/A
Water (without reclaimed outdoor water)	0	0	0	0	0	0	0	0	0	0	0	0	358
Total (without on-site WWTP)[5]	**48**	**51**	**149**	**0.46**	**25**	**8.1**	**8.8**	**9.4**	**27**	**0.083**	**4.7**	**1.5**	**11,067**
Above Threshold without on-site WWTP?	No	No	N/A	N/A	No	No	No	No	N/A	N/A	No	No	N/A
BAAQMD Emissions Threshold	54	54	-	-	82	54	10	10	-	-	15	10	-
Reductions													
Mitigation Measure	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
	(lbs/day)						(tons/year)						(MT/year)
Area - Super-compliant VOC Paints (Interior/Exterior)	7.0	0	0	0	0	0	1.3	0	0	0	0	0	0
Energy - Energy Efficient Appliances	0	0	0	0	0	0	0	0	0	0	0	0	7.5
Mobile - TDM	2.0	4.2	21	0.062	3.7	1.1	0.37	0.76	3.8	0.011	0.67	0.20	1,050
Mobile - EV Chargers	0.65	1.3	14	0.043	0.027	0.025	0.12	0.25	2.6	0.0079	0.0050	0.0046	650
Waste - 50% Waste Reduction	0	0	0	0	0	0	0	0	0	0	0	0	353
Water - Low Flow Faucets & Toilets	0	0	0	0	0	0	0	0	0	0	0	0	78
Ferry - Tier 4 Ferry Engines	2.5	8.9	0	0	0.66	0.66	0.47	1.6	0	0	0.12	0.12	0
Total[5]	**12**	**14**	**35**	**0.11**	**4.4**	**1.8**	**2.2**	**2.6**	**6.4**	**0.019**	**0.80**	**0.32**	**2,138**

Notes:

1. Land use types for the commercial heavy scenario are summarized in Table A2.
2. Construction emissions for Project and WWTP, as well as operational emissions from Area, Energy, Mobile, Stationary, Waste and Water source categories are estimated using CalEEMod 2016.3.2. Construction emissions also conservatively include emissions from the Bay Trail construction within the Project site even though construction of the Bay Trail has already been approved.
3. Project construction emissions in lbs/day are calculated by dividing the total emissions (in tons) by the actual number of project construction days (2,859 days). Construction emissions were conservatively estimated assuming soil exported from the Project site will be hauled by trucks. The Project may also export soil using barges (pulled by tug boats). A comparison of emissions from haul trucks and tug boats are provided in Table A3, showing total emissions from tug boats would be lower than haul trucks.
4. WWTP construction emissions in lbs/day are calculated by dividing the total-emissions (in tons) by the actual number of treatment plant construction days (6 days).
5. Sum totals may not add up exactly due to rounding.
6. Area emissions assume that 600 natural gas fireplaces will be installed with the project, and that landscaping will be required for 10 acres of city park, as provided by the Project Sponsor. The consumer product VOC emission factor is specific to Contra Costa County for 2017. The emission factor is determined based on the following methodology - first, a reduction efficiency for VOC emissions for Contra Costa County was calculated based on the percent different for Contra Costa County relative to the 2008 VOC per capita emission factor for the entire state; the 2017 county specific emission factor was then calculated by applying this reduction to the 2017 statewide VOC emission factor, assuming that building square footage roughly scales with population and the percent reduction per capita stays the same (as in 2008).
7. Energy and Natural Gas usage for unmitigated and mitigated emissions incorporate the 2019 Title 24 standards as a Project design feature. This includes the installation of solar on all single family and low-rise units, equivalent to offset the expected annual electricity usage. The Project also assumes, as a Project design feature, that 25% of all residential units will have no natural gas usage (75% will retain usage) and these units are assumed to be electrified (estimated natural gas usage was converted to electricity assuming an equivalent MMBTU conversion). Historical energy use rates are utilized in emission calculations for all historical buildings.
8. CalEEMod energy intensity factors for CO_2, CH_4, and N_2O are estimated from Pacific Gas & Electric Renewable Portfolio Standard (RPS) projections for the first operational year (partial buildout in 2024). For specifics regarding RPS projection estimates, see Table EF1.
9. Vehicle emissions estimated from CalEEMod are based on mobile trip rate inputs provided in the Project's Transportation Impact Analysis (TIA). Trip rates provided by the Project's TIA already account for a 20% internal trip reduction and a 10% reduction in trips due to TDM measures. Vehicle trip rates for the commercial heavy scenario are summarized in Table A5.
10. Unmitigated ferry emissions are estimated using Tier 2 emission factors for all pollutants. Mitigated ferry emissions assume Tier 4 engine emission factors for ROG, NO_x, CO and PM. See Table A6 for additional details.
11. Operational emissions for the WWTP are estimated using CalEEMod, in additional to outside data sources. The WWTP system is defined as a 'General Light Industry' land use type in CalEEMod. However, the WWTP is not expected to have any area emissions from Consumer products and architectural coating; thus this value in the CalEEMod output table is not included here. Mobile emissions from brine trucks are estimated using EMFAC 2017 emission factors for HHDT, as shown in Table A7. VOC emissions from the WWTP are estimated using MDAQMD's default emission factor for activated sludge treatment systems, as shown in Table A8. Emissions from hauling sewage with trucks is included in Table A9. No mitigation measures are applied to WWTP emissions.
12. Mitigated area emissions are estimated assuming the use of "super-compliant" VOC architectural coating for residential and non-residential interior and exterior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113 (10 g/L).
13. Mitigated GHG emissions from electricity use are estimated by assuming energy-efficient appliances (Dishwashers, Clothes Washers, Fans and Refrigerators) for residential units and quality restaurants. CalEEMod default efficiency inputs are used for all appliances.
14. Mitigated mobile emissions are estimated by applying additional TDM measures which would lead to a 13% reduction in trip generation (for a total of 23% reduction due to TDM), as provided by the Project Sponsor. Mitigation measures to install Level 2 equivalent Residential EV Chargers in single family units and Commercial EV Chargers consistent with CalGreen Tier 1 standards would lead to further reduction in mobile emissions. Calculations of GHG and CAP emission reductions associated with the EV Chargers are provided Tables M5 - M8.
15. Mitigated waste emissions are estimated by assuming that the Project will institute recycling and composting services which would lead to a 50% reduction in solid waste.
16. Mitigated water use emissions are estimated by assuming that the Project will install low-flow bathroom faucets, low-flow kitchen faucets, low-flow toilets and low-flow showers. CalEEMod default efficiency inputs are used for all appliances.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District
CalEEMod - California Emissions Estimator MODel
CO - Carbon Monoxide
CO2e - carbon dioxide equivalents
HHDT - Heavy Heavy Duty Trucks
lbs - pounds
MDAQMD - Mojave Desert Air Quality Management District
MT - Metric Tons
NOx - oxides of nitrogen
PM - Particulate Matter
ROG - reactive organic gases
SO2 - Sulfur dioxide
WWTP - Waste Water Treatment Plant

References:

California Air Resources Board Non-road Diesel Engine Certification Tier Chart. Available online at: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

CalEEMod® 2016.3.2 Available Online at: http://www.caleemod.com

Mojave Desert Air Quality Management District. Emissions Inventory Program. Available online at: http://www.mdaqmd.ca.gov/home/showdocument?id=790

South Coast Air Quality Management District. Super-Compliant Architectural Coatings. Available online at: http://www.aqmd.gov/home/rulescompliance/compliance/vocs/architectural-coatings/super-compliant-coatings

Table A1
Project Land Uses - Residential Heavy (Project 1)
Point Molate
Richmond, CA

Land Use Type[1]	Size	Units	Lot Size (acre)
Residential (Planning Area A-D): Low-Rise, medium density (new)	286	Dwelling Unit	80.00
Residential: (Planning Area F-H): Low-Rise, medium density (new)	350	Dwelling Unit	
Residential (Planning Area E): Mid-Rise, high density (new)	350	Dwelling Unit	
Residential: (Planning Area F-H): Mid-Rise, high density (historic building)	473	Dwelling Unit	
Residential: (Planning Area F-H): Mid-Rise, high density (new)	307	Dwelling Unit	
Residential: (Planning Area B-D): Single family units, medium density (new)	274	Dwelling Unit	
Retail: (Planning Area F-H): Regional Shopping Center (historic building)	10,000	sq ft	
Retail: (Planning Area F-H): Regional Shopping Center (new)	10,000	sq ft	
Recreational: (Planning Area F-H): Quality Restaurant (historic building)	10,000	sq ft	
Recreational: (Planning Area F-H): Quality Restaurant (new)	10,000	sq ft	
Recreational: City Park	30	acres	30.00
Recreational: Bay Trail Development	118,800	sq ft	2.73
Terminal on existing Pier	5,000	sq ft	0
Terminal Parking Structure	100	spaces	

Notes:

1. Land use types and unit amounts are used as inputs to CalEEMod® and are provided by the Project Sponsor. Land use types which include a mixture of historical building re-use and new building development are split into separate land use rows, as each building type involves different construction and operational characteristics within CalEEMod®.

Abbreviations:

CalEEMod® - California Emissions Estimator Model

sq ft - square feet

References:

CalEEMod® 2016.3.2 Available Online at: http://www.caleemod.com

Table A2
Project Land Uses - Commercial Heavy (Project 2)
Point Molate
Richmond, CA

Land Use Type[1]	Size	Units	Lot Size (acre)
Residential (Planning Area A-D): Low-Rise, medium density	336	Dwelling Unit	80.00
Residential (Planning Area E): Mid-Rise, high density	350	Dwelling Unit	
Residential: (Planning Area F-H): Low-Rise, medium density (new)	300	Dwelling Unit	
Residential: (Planning Area B-D): Single family units, medium density (new)	274	Dwelling Unit	
Commercial: (Planning Area F-H): Office Park (historic building)	354,572	sq ft	
Commercial: (Planning Area F-H): Office Park (new)	230,000	sq ft	
Retail: (Planning Area F-H): Regional Shopping Center (historic building)	10,000	sq ft	
Recreational: (Planning Area F-H): Quality Restaurant (historic building)	10,000	sq ft	
Retail: (Planning Area F-H): Regional Shopping Center (new)	10,000	sq ft	
Recreational: (Planning Area F-H): Quality Restaurant (new)	10,000	sq ft	
Recreational: City Park	30	acres	30.00
Recreational: Bay Trail Development	118,800	sq ft	2.73
Terminal on existing Pier	5,000	sq ft	0.00
Terminal Parking Structure	100	spaces	

Notes:

1. Land use types and unit amounts are used as inputs to CalEEMod® and are provided by the Project Sponsor. Land use types which include a mixture of historical building re-use and new building development are split into separate land use rows, as each building type involves different construction and operational characteristics within CalEEMod®.

Abbreviations:

CalEEMod® - California Emissions Estimator Model

sq ft - square feet

References:

CalEEMod® 2016.3.2 Available Online at: http://www.caleemod.com

Table A3
Construction Emissions from Tug Boat Material Export
Point Molate
Richmond, CA

Material Export and Tug Boat Parameters:

Load factor[1] (Main engine)	Tug boat rating[2]		Material Volume[2]	Material carried per barge[2]	Total Barges	Total Tugs[2]	Time per one-way tug trip[2]	Total tug transit hours (hrs)[2]	Brake-specific Fuel Consumption Rate[3]
	(hp)	(kW)	(cubic yds)	(cubic yds)			(hours)		(g/hp-hr)
0.50	1,600	1,193	355,000	2,000	178	89	0.50	89	184

EPA Tier 2 Emission Factors for Diesel Engines[4]:

Engine	NO_x[5]	PM_{10}	$PM_{2.5}$	ROG[5]	CO	SO_x[6]	CO_2e
	(g/bhp-hr)						(g/kWh)
Tug Total	4.2	0.15	0.15	0.60	2.6	0.0028	--

Tug Boat Transit Emissions (Tier 2):

Engine	NO_x	PM_{10}	$PM_{2.5}$	ROG	CO	SO_x	CO_2e[8]
	(tons)						(MT)
Tug total	0.33	0.012	0.012	0.047	0.20	2.2E-04	37
Total Emissions	**0.33**	**0.012**	**0.012**	**0.047**	**0.20**	**2.2E-04**	**37**

Comparison of Emissions from Haul Trucks and Tug Boats for Exporting Soil[9]

Source of Emission	NO_x	PM_{10}	$PM_{2.5}$	ROG	CO	SO_x	CO_2e
	(tons)						(MT)
Project 1 and Project 2 - Haul Truck Emissions Total	5.6	0.018	0.017	0.17	1.1	0.017	1,609
Tug Emissions	0.33	0.012	0.012	0.047	0.20	2.2E-04	37

Notes:

1. Engine load factors for Tug Boats taken from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Table II-3.
2. Tug boat rating, total material volume, material carried per barge, and number of barges carried per tug boat were provided by the Project Sponsor. 30,000 additional cubic yards of material were added as an upper bound of potential remediation activities. A one-way trip time of 30 minutes is assumed. Total number of tug trips are rounded up to the nearest whole number to reflect total trip count. All tug trips are assumed to be two-ways.
3. Brake-specific fuel consumption rate is assumed from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Section 2 (SOx Emission Estimation)
4. Tier 2 emission factors are assumed for all tugs, based on California Air Resources Board Non-road Diesel Engine Certification Tier Chart for engines >1207 horsepower.
5. NOx-only emission factor assumed from California Air Resources Board - Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets: Emission Factors by Horsepower and Year table.
6. Annual emissions for SOx are calculated using methods from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Section 2.
7. GHG emission factors were estimated for Harbor Craft vessels based on US EPA Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories.
8. Global warming potential values of 1 for CO_2, 25 for CH_4, and 298 for N_2O from US EPA's Federal Register (FR) final rule published on November 29, 2013 [78 FR 71904] and effective on January 1, 2014, were used to convert emissions to metric tons of carbon dioxide equivalents.
9. Haul Truck emissions are based on a total material export of 355,000 CY of soil.

Abbreviations:

bhp - brake horsepower
CARB - California Air Resources Board
CH_4 - methane
CO - carbon monoxide
CO_2 - carbon dioxide
ROG - reactive organic gases
g - gram
hp - horsepower
hr - hour
kw - kilowatts
kWh - kilowatt hour
NO_x - Nitrogen oxides
N_2O - nitrous oxide
PM - Particulate Matter
CO_2e - carbon dioxide equivalents

References:

CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B. Accessible at: https://ww3.arb.ca.gov/regact/2007/chc07/appb.pdf

California Air Resources Board Non-road Diesel Engine Certification Tier Chart. Available online at: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

California Air Resources Board Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets. Available online at: https://ww3.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf

US EPA Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories. Available online at: https://www.epa.gov/sites/production/files/2016-06/documents/2009-port-inventory-guidance.pdf

Table A4
Trip Generation Rates - Residential Heavy (Project 1)
Point Molate
Richmond, CA

Transportation Impact Analysis Data and CalEEMod Default Trip Rates

Land Use	Size	Units	ADT[1]	Trips/Day/Unit Size	Units	Adjusted ADT after accounting for Reductions[2]	Adjusted Trips/Day/Unit Size	Units
Retail	20	KSF	641	32	Trips/KSF	461	23	Trips/KSF
Restaurant	20	KSF	641	32	Trips/KSF	461	23	Trips/KSF
Office	585	KSF	4,782	8.2	Trips/KSF	3,443	5.9	Trips/KSF
Single Family Units	274	DU	2,630	10	Trips/DU	1,894	6.9	Trips/DU
Low-Rise Apartments	636	DU	4,770	7.5	Trips/DU	3,434	5.4	Trips/DU
Mid-Rise Apartments	350	DU	1,908	5.5	Trips/DU	1,374	3.9	Trips/DU
Public Ferry Parking	100	spaces	281	2.8	Trips/space	202	2.0	Trips/space
Subtotal			15,652					
Internal Trip Reduction (20%)			3,130					
TDM Trip Reduction (10%)			1,252					
Net new Project Trips			**11,269**					

Project-Specific Trip Generation

Land Use Type	Land Use Amount		Adjusted Trip Rates		
	Size	Units	Weekday Trips (rate/size/day)	Saturday Trips[4] (rate/size/day)	Sunday Trips[4] (rate/size/day)
Residential (Planning Area A-D): Low-Rise, medium density (new)	286	Dwelling Unit	5.4	5.9	5.0
Residential: (Planning Area F-H): Low-Rise, medium density (new)	350	Dwelling Unit	5.4	5.9	5.0
Residential (Planning Area E): Mid-Rise, high density (new)	350	Dwelling Unit	3.9	3.8	3.5
Residential: (Planning Area F-H): Mid-Rise, high density (historic building)	473	Dwelling Unit	3.9	3.8	3.5
Residential: (Planning Area F-H): Mid-Rise, high density (new)	307	Dwelling Unit	3.9	3.8	3.5
Residential: (Planning Area B-D): Single family units, medium density (new)	274	Dwelling Unit	6.9	7.2	6.3
Retail: (Planning Area F-H): Regional Shopping Center (historic building)	10	KSF	23	27	14
Retail: (Planning Area F-H): Regional Shopping Center (new)	10	KSF	23	27	14
Recreational: (Planning Area F-H): Quality Restaurant (historic building)	10	KSF	23	24	18
Recreational: (Planning Area F-H): Quality Restaurant (new)	10	KSF	23	24	18
Recreational: City Park	30	acres	1.9	23	17
Recreational: Bay Trail Development	2.7	acres	1.9	23	17
Terminal on existing Pier	5,000	sq ft	--	--	--
Parking: Ferry Terminal	100	spaces	2.0	2.0	2.0

Notes:

1. Average Daily Traffic (ADT) was provided in the Project's Transportation Impact Analysis (TIA).
2. Adjusted ADT is calculated by accounting for a 20% internal trip reduction and an additional 10% reduction due to Transportation Demand Management (TDM) measures, per the Project TIA.
3. Default CalEEMod® trip rates are obtained from CalEEMod Appendix D (Default Data Tables).
4. Adjusted Saturday and Sunday trip rates are estimated by scaling the weekday trip rate based on CalEEMod® default Saturday and Sunday trip rates for each land use.

Abbreviations:

ADT - average daily traffic
CalEEMod® - California Emissions Estimator Model
DU - dwelling units
ksf - thousand square feet
sq ft - square feet
TDM - Transportation Demand Management

References:

CalEEMod® version 2016.3.2, Default Data Tables (Appendix D). Available online at: http://www.caleemod.com/

Table A5
Trip Generation Rate - Commercial Heavy (Project 2)
Point Molate
Richmond, CA

Transportation Impact Analysis Data and CalEEMod Default Trip Rates

Land Use	Size	Units	ADT[1]	Trips/Day/Unit Size	Units	Adjusted ADT after accounting for Reductions[2]	Adjusted Trips/Day/Unit Size	Units
Retail	20	KSF	641	32	Trips/KSF	461	23	Trips/KSF
Restaurant	20	KSF	641	32	Trips/KSF	461	23	Trips/KSF
Office	585	KSF	4,782	8.2	Trips/KSF	3,443	5.9	Trips/KSF
Single Family Units	274	DU	2,630	10	Trips/DU	1,894	6.9	Trips/DU
Low-Rise Apartments	636	DU	4,770	7.5	Trips/DU	3,434	5.4	Trips/DU
Mid-Rise Apartments	350	DU	1,908	5.5	Trips/DU	1,374	3.9	Trips/DU
Public Ferry Parking	100	spaces	281	2.8	Trips/space	202	2.0	Trips/space
Subtotal			15,652					
Internal Trip Reduction (20%)			3,130					
TDM Trip Reduction (10%)			1,252					
Net new Project Trips			**11,269**					

Project-Specific Trip Generation

Land Use Type	Land Use Amount		Adjusted Trip Rates		
	Size	Units	Weekday Trips (rate/size/day)	Saturday Trips[4] (rate/size/day)	Sunday Trips[4] (rate/size/day)
Residential (Planning Area A-D): Low-Rise, medium density	376	Dwelling Unit	5.4	5.9	5.0
Residential (Planning Area E): Mid-Rise, high density	350	Dwelling Unit	3.9	3.8	3.5
Residential: (Planning Area F-H): Low-Rise, medium density (new)	300	Dwelling Unit	5.4	5.9	5.0
Residential: (Planning Area B-D): Single family units, medium density (new)	274	Dwelling Unit	6.9	7.2	6.3
Commercial: (Planning Area F-H): Office Park (historic building)	355	KSF	5.9	0.85	0.39
Commercial: (Planning Area F-H): Office Park (new)	230	KSF	5.9	0.85	0.39
Retail: (Planning Area F-H): Regional Shopping Center (historic building)	10	KSF	23	27	14
Recreational: (Planning Area F-H): Quality Restaurant (historic building)	10	KSF	23	24	18
Retail: (Planning Area F-H): Regional Shopping Center (new)	10	KSF	23	27	14
Recreational: (Planning Area F-H): Quality Restaurant (new)	10	KSF	23	24	18
Recreational: City Park	30	acres	1.9	23	17
Recreational: Bay Trail Development	2.7	acres	1.9	23	17
Terminal on existing Pier	5,000	sq ft	--	--	--
Parking: Ferry Terminal	100	spaces	2.0	2.0	2.0

Notes:

1. Average Daily Traffic (ADT) was provided in the Project's Transportation Impact Analysis (TIA).
2. Adjusted ADT is calculated by accounting for a 20% internal trip reduction and an additional 10% reduction due to Transportation Demand Management (TDM) measures.
3. Default CalEEMod® trip rates are obtained from CalEEMod Appendix D (Default Data Tables).
4. Adjusted Saturday and Sunday trip rates are estimated by scaling the weekday trip rate based on CalEEMod® default Saturday and Sunday trip rates for each land use

Abbreviations:

ADT - average daily traffic
CalEEMod® - California Emissions Estimator Model
DU - dwelling units
ksf - thousand square feet
sq ft - square feet
TDM - Transportation Demand Management

References:

CalEEMod® version 2016.3.2, Default Data Tables (Appendix D). Available online at: http://www.caleemod.com/

Table A6
Ferry Emissions - Unmitigated & Mitigated
Point Molate
Richmond, CA

Ferry Engine Parameters:

Engine	Engine Horsepower[1]	Engine Load factor[2] (transit)	Engine Load factor[2] (Idling)	Annual hours in Transit[3]	Annual hours Idling[4]	Brake-specific Fuel Consumption Rate[5]
						[g/hp-hr]
Ferry total	2,900	0.42	0.010	730	964	184

EPA Emission Factors for Diesel Engines[6]:

Engine Tier	NO_x[7]	PM	ROG[7]	CO	SO_x[8]	CO_2[9]	N_2O[9]	CH_4[9]	CO_2e
	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/kWh)	(g/kWh)	(g/kWh)	(MT/yr)
Tier 2	4.2	0.15	0.60	2.6	0.0028	690	0.020	0.090	--
Tier 4	2.6	0.030	0.14	2.6					
Unmitigated Ferry Emissions (Tier 2)[10]									
	NO_x	PM	ROG	CO	SO_x	CO_2	N_2O	CH_4	CO_2e[11]
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(MT/yr)	(MT/yr)	(MT/yr)	(MT/yr)
Transit Total	4.1	0.15	0.59	2.5	0.0027	457	0.013	0.060	463
Idling Total	0.13	0.0046	0.018	0.080	8.5E-05	14	4.2E-04	0.0019	15
Total Emissions	**4.2**	**0.15**	**0.61**	**2.6**	**0.0028**	**472**	**0.014**	**0.062**	**477**
Mitigated Ferry Emissions[12]									
	NO_x	PM	ROG	CO	SO_x	CO_2	N_2O	CH_4	CO_2e[11]
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(MT/yr)	(MT/yr)	(MT/yr)	(MT/yr)
Transit Total	2.5	0.029	0.14	2.5	0.0027	457	0.013	0.060	463
Idling Total	0.080	9.2E-04	0.0043	0.080	8.5E-05	14	4.2E-04	0.0019	15
Total Emissions	**2.6**	**0.030**	**0.14**	**2.6**	**0.0028**	**472**	**0.014**	**0.062**	**477**

Notes:

1. Ferries are assumed to be "small-sized" (149-passenger, 2,900 HP) corresponding to classification in the 2003 WETA Program EIR.
2. Engine load factors for ferry transit are from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Table II-3. Engine loads during idling are assumed to be 0.01, consistent with the 2013 SF Ferry Terminal Expansion EIR.
3. Annual Transit hours are based on 4 one-way trips per day, calculated using the transit time of the route from SF Ferry Terminal to Larkspur Terminal (30 minutes). While the proposed distance from SF Ferry Terminal to Point Molate is slightly shorter, 30 minutes is used as a conservative assumption.
4. Annual Idling hours are based on 4 one-way trips per day (see above) using average berth time of 20 mins per visit on both trip ends, as per the 2013 SF Ferry Terminal Expansion EIR.
5. Brake-specific fuel consumption rate is assumed from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Section 2 (SOx Emission Estimation).
6. Emission factors are pulled from the CARB Non-road Diesel Engine Certification Tier Chart for engines >750 horsepower. Tier 2 emission factors are used to estimate unmitigated emissions, consistent with the 2013 WETA Program EIR which assumes by 2025 all ferries are expected to be Tier 2 or equivalent.
7. Tier 2 NO_x-only emission factor is assumed from CARB - Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets: Emission Factors by Horsepower and Year table. Tier 2 emission factor for ROG is assumed by subtracting from NO_x+NMHC emission factor from CARB Non-road Diesel Engine Certification Tier Chart. Tier 4 emissions are given separately for NO_x and NMHC in the Engine Certification Tier Chart. NMHC and ROGs are approximately the same with some small differences, and used interchangeably here.
8. SO_x emissions are calculated using methods from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Section 2.
9. GHG emission factors were estimated for Harbor Craft vessels based on US EPA Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories.
10. Unmitigated ferry emissions are estimated assuming Tier 2 emission factors.
11. Global warming potential values of 1 for CO_2, 25 for CH_4, and 298 for N_2O from US EPA's Federal Register (FR) final rule published on November 29, 2013 [78 FR 71904] and effective on January 1, 2014, were used to convert emissions to metric tons of carbon dioxide equivalents.
12. Mitigated ferry emissions are estimated assuming Tier 4 emission factors.

Abbreviations

bhp - brake horsepower
CARB - California Air Resources Board
CH_4 - methane
CO - carbon monoxide
CO_2 - carbon dioxide
ROG - reactive organic gases
g - gram
hp - horsepower
hr - hour
kw - kilowatts
kWh - kilowatt hour
NO_x - Nitrogen oxides
N_2O - nitrous oxide
PM - Particulate Matter
CO_2e - carbon dioxide equivalents
tons - short tons
yds - yards
yr - year
MT - metric tons

References

CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Accessible at: https://ww3.arb.ca.gov/regact/2007/chc07/appb.pdf

California Air Resources Board Non-road Diesel Engine Certification Tier Chart. Available online at: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

California Air Resources Board Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets. Available online at: https://ww3.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf

San Francisco Bay Ferry Water Emergency Transportation Authority (WETA) Publications - 2003 Program Environmental Impact Report. Accessible online at: https://weta.sanfranciscobayferry.com/publications

US EPA Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories available at: https://www.epa.gov/sites/production/files/2016-06/documents/2009-port-inventory-guidance.pdf

Table A7
WWTP Brine Truck Emissions Calculations
Point Molate
Richmond, CA

Distances	Contra Costa Landfill
One Way (miles)[1]	6.1
Round Trip (miles)	12
Number of Trips per Day[2]	0.20
Daily Total (miles)	2.4

Pollutant[3]	Emission Factor Category[3]	Emission Factor[4]	Units	Daily Emissions (g/day)
CH_4	Idling Exhaust	0.024	g/trip	0.0049
	Running Exhaust	0.047	g/mile	0.11
	Starting Exhaust	3.7E-07	g/trip	7.4E-08
CO	Idling Exhaust	6.3	g/trip	1.3
	Running Exhaust	0.40	g/mile	1.0
	Starting Exhaust	0.0053	g/trip	0.0011
CO_2	Idling Exhaust	1,039	g/trip	208
	Running Exhaust	1,409	g/mile	3,438
	Starting Exhaust	0.042	g/trip	0.0084
NO_X	Idling Exhaust	5.3	g/trip	1.1
	Running Exhaust	2.7	g/mile	6.5
	Starting Exhaust	2.4	g/trip	0.47
PM_{10}	Idling Exhaust	0.0026	g/trip	5.2E-04
	Brake Wear	0.061	g/mile	0.15
	Tire Wear	0.035	g/mile	0.087
	Running Exhaust	0.025	g/mile	0.061
	Starting Exhaust	7.0E-07	g/trip	1.4E-07
$PM_{2.5}$	Idling Exhaust	0.0025	g/trip	5.0E-04
	Brake Wear	0.026	g/mile	0.064
	Tire Wear	0.0089	g/mile	0.022
	Running Exhaust	0.024	g/mile	0.058
	Starting Exhaust	6.4E-07	g/trip	1.3E-07
ROG	Diurnal Loss	2.0E-06	g/trip	4.0E-07
	Hot Soak	9.4E-05	g/trip	1.9E-05
	Idling Exhaust	0.42	g/trip	0.085
	Resting Loss	1.2E-06	g/trip	2.5E-07
	Running Exhaust	0.025	g/mile	0.062
	Running Loss	4.4E-05	g/mile	1.1E-04
	Starting Exhaust	1.9E-06	g/trip	3.9E-07
SO_2	Idling Exhaust	0.010	g/trip	0.0019
	Running Exhaust	0.013	g/mile	0.031
	Starting Exhaust	4.2E-07	g/trip	8.4E-08
TOG	Diurnal Loss	2.0E-06	g/trip	4.0E-07
	Hot Soak	9.4E-05	g/trip	1.9E-05
	Idling Exhaust	0.49	g/trip	0.10
	Resting Loss	1.2E-06	g/trip	2.5E-07
	Running Exhaust	0.075	g/mile	0.18
	Running Loss	4.4E-05	g/mile	1.1E-04
	Starting Exhaust	2.1E-06	g/trip	4.3E-07

Pollutant	Total Emissions (g/day)	Total Emissions (tons/year or MT/year)
ROG	0.15	5.9E-05
NO_x	8.0	0.0032
CO	2.2	9.0E-04
SO_2	0.033	1.3E-05
PM_{10}	0.30	1.2E-04
$PM_{2.5}$	0.14	5.8E-05
CO_2e	3,649	1.3

Notes:

1. The brine trucks are assumed to go to the closest landfill facility (Contra Costa Landfill); the closest land fill is located roughly 6.1 miles from the Project site.
2. The brine trucks are assumed to travel to the landfill once per week, as provided by the Project Sponsor. This is roughly estimated to 1/5 trips/day; assuming trucks run only on weekdays.
3. Emissions for the brine trucks are estimated using EMFAC 2017 for Contra Costa County.
4. The brine trucks are assumed to be only Heavy Heavy Duty Trucks.

Abbreviations:

WWTP - Wastewater Treatment Plant
g - grams
MT - metric tons
CH_4 - Methane
CO - Carbon Monoxide
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide equivalents
NO_X - Nitrogen Oxides
PM_{10} - Particulate Matter <10 µm in diameter
$PM_{2.5}$ - Particulate Matter <2.5 µm in diameter
ROG - Reactive Organic Gases
SO_2 - Sulfur Dioxide
TOG - Total Organic Gases

Table A8
Process VOC Emissions from WWTP
Point Molate
Richmond, CA

Parameter	Value	Units
Total Volume of Water through treatment plant[1]	0.30	MMGD
VOC Emission factor for activated sludge biological treatment system[2]	185.75	lbs/year/MMGD
Total VOC emissions	55.73	lbs/year
	0.15	lbs/day

Notes:

1. The average daily from through the WWTP is obtained from the Energy Demand Memo provided by the Project Sponsor.
2. VOC emissions from the treatment plant are estimated using MDAQMD's default emission factor for activated sludge treatment systems.

Abbreviations:

VOC - Volatile Organic Compounds
WWTP - Wastewater Treatment Plant
MMGD - million gallons per day
MDAQMD - Mojave Desert Air Quality Management District
lbs - pounds

References:

Mojave Desert Air Quality Management District. Emissions Inventory Program. Available online at: http://www.mdaqmd.ca.gov/home/showdocument?id=790

Table A9
WWTP Sewage Truck Emissions Calculations
Point Molate
Richmond, CA

Distances	West County Wastewater
One Way (miles)[1]	5.0
Round Trip (miles)	10
Wastewater flow (gpd)	275,672
Number of Days of wastewater hauled per year	3.0
Total wastewater hauled per year	827,016
Water Tank Capacity (gals)	5,000
Total number of haul trips needed	166
Haul trips per day	55
Daily Total (miles)	553

Pollutant[3]	Emission Factor Category[3]	Emission Factor[4]	Units	Daily Emissions (g/day)
CH_4	Idling Exhaust	0.024	g/trip	1.3
	Running Exhaust	0.047	g/mile	26
	Starting Exhaust	3.7E-07	g/trip	2.1E-05
CO	Idling Exhaust	6.3	g/trip	347
	Running Exhaust	0.40	g/mile	223
	Starting Exhaust	0.0053	g/trip	0.30
CO_2 - Non Biogenic	Idling Exhaust	1,039	g/trip	57,504
	Running Exhaust	1,409	g/mile	779,759
	Starting Exhaust	0.042	g/trip	2.3
NO_X	Idling Exhaust	5.3	g/trip	295
	Running Exhaust	2.7	g/mile	1,472
	Starting Exhaust	2.4	g/trip	130
PM_{10}	Idling Exhaust	0.0026	g/trip	0.14
	Brake Wear	0.061	g/mile	34
	Tire Wear	0.035	g/mile	20
	Running Exhaust	0.025	g/mile	14
	Starting Exhaust	7.0E-07	g/trip	3.9E-05
$PM_{2.5}$	Idling Exhaust	0.0025	g/trip	0.14
	Brake Wear	0.026	g/mile	14
	Tire Wear	0.0089	g/mile	4.9
	Running Exhaust	0.024	g/mile	13
	Starting Exhaust	6.4E-07	g/trip	3.6E-05
ROG	Diurnal Loss	2.0E-06	g/trip	1.1E-04
	Hot Soak	9.4E-05	g/trip	0.0052
	Idling Exhaust	0.42	g/trip	23
	Resting Loss	1.2E-06	g/trip	6.9E-05
	Running Exhaust	0.025	g/mile	14
	Running Loss	4.4E-05	g/mile	0.025
	Starting Exhaust	1.9E-06	g/trip	1.1E-04
SO_2	Idling Exhaust	0.010	g/trip	0.54
	Running Exhaust	0.013	g/mile	7.1
	Starting Exhaust	4.2E-07	g/trip	2.3E-05
TOG	Diurnal Loss	2.0E-06	g/trip	1.1E-04
	Hot Soak	9.4E-05	g/trip	0.0052
	Idling Exhaust	0.49	g/trip	27
	Resting Loss	1.2E-06	g/trip	6.9E-05
	Running Exhaust	0.075	g/mile	41
	Running Loss	4.4E-05	g/mile	0.025
	Starting Exhaust	2.1E-06	g/trip	1.2E-04

Pollutant	Total Emissions (g/day)	Total Emissions (tons/year or MT/year)
ROG	38	1.2E-04
NO_x	1,898	0.0063
CO	571	0.0019
SO_2	7.7	2.5E-05
PM_{10}	67	2.2E-04
$PM_{2.5}$	33	1.1E-04
CO_2e	837,943	2.8

Notes:

1. Sewage trucks are assumed to go to either the Richmond Sewage Treatment Plant or West County Wastewater; the further distance of the two (5 miles to West County Wastewater) is used conservatively.
2. Sewage trucks are assumed to travel to the wastewater facility up to 3 days per year in the event of an onsite WWTP outage.
3. Emissions for the sewage trucks are estimated using EMFAC 2017 for Contra Costa County.
4. The sewage trucks are assumed to be only Heavy Heavy Duty Trucks.

Abbreviations:

CH_4 - Methane
CO - Carbon Monoxide
CO_2 - Carbon Dioxide
CO_2e - Carbon Dioxide equivalents
g - grams
gpd - grams per day
MT - metric tons
NO_X - Nitrogen Oxides
PM_{10} - Particulate Matter <10 µm in diameter
$PM_{2.5}$ - Particulate Matter <2.5 µm in diameter
ROG - Reactive Organic Gases
SO_2 - Sulfur Dioxide
TOG - Total Organic Gases
WWTP - Wastewater Treatment Plant

Table EF1
Energy Usage Emission Factors
Point Molate
Richmond, CA

Historical Electricity Intensity

Annual Electricity Data	2015	2016	2017	Average[1]	Units
CO_2 Intensity Factor per Total Energy Delivered[2]	405	294	210	303	lbs CO_2/MWh delivered
% of Total Energy From RPS-Eligible Renewables[3]	0.30	0.33	0.33	0.32	-
CO_2 Intensity Factor per Total Non-RPS-Eligible Energy[4]	574	437	314	444	lbs CO_2/MWh delivered

Estimated Intensity Factor for Total Energy Delivered[5,6]

Model Year	2015	2016	2017	Average[1]	Units
2020 RPS (33%)	384	293	210	297	lbs CO_2/MWh delivered
	386	295	212	299	lbs CO_2e/MWh delivered
2030 RPS (60%)[7]	230	175	126	178	lbs CO_2/MWh delivered
	232	177	128	180	lbs CO_2e/MWh delivered
2045 RPS (100%)[7]	0	0	0	0	lbs CO_2/MWh delivered
	2.0	2.0	2.0	2.0	lbs CO_2e/MWh delivered

Greenhouse Gas Energy Emission Factors

Greenhouse Gas	CO_2	CH_4	N_2O	CO_2e	Units
Global Warming Potential[6]	1.0	25	298	-	-
2019 (Existing) Electricity Use Emission Factor[7]	299	0.033	0.004	301	lb/MWh
	0.14	1.5E-05	1.8E-06	0.14	MT/MWh
2020 Electricity Use Emission Factor[7]	297	0.033	0.004	299	lb/MWh
	0.13	1.5E-05	1.8E-06	0.14	MT/MWh
2024 (First Year of Operation) Electricity Use Emission Factor[7]	249	0.033	0.004	251	lb/MWh
	0.11	1.5E-05	1.8E-06	0.11	MT/MWh
2028 (Full Buildout) Electricity Use Emission Factor[7]	201	0.033	0.004	203	lb/MWh
	0.09	1.5E-05	1.8E-06	0.09	MT/MWh
Natural Gas Use Emission Factor[8]	118	0.0023	0.0022	118	lb/MMBTU
	0.0053	1.0E-07	9.8E-08	0.0054	MT/therm

Notes:

1. Total CO_2 emission factor from The Climate Registry.
2. Percent of total energy from eligible renewables is from the PG&E 2015, 2016, and 2017 Corporate Responsibility Reports.
3. This average uses the most recent three years of data.
4. The emissions metric presented here is calculated based on the total CO_2 intensity factor divided by the percent of energy delivered from non-RPS-eligible renewable sources. This CO_2 intensity factor includes both fossil fuel and carbon-free sources of energy, such as largescale hydro and nuclear. Diablo Canyon Nuclear Plant, which accounts for a portion of the carbon-free energy in this CO_2 intensity factor, is planned to be closed by 2024-2025. According to SB 1090 (approved 9/2018), "The [California Public Utilities] commission shall ensure that integrated resource plans are designed to avoid any increase in emissions of greenhouse gases as a result of the retirement of the Diablo Canyon Units 1 and 2 powerplant." This was incorporated into CPUC section 712.7(2)(b). Based on this information, the total Non-RPS-Eligible energy CO_2 intensity factor was assumed to remain constant.
5. The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-RPS-eligible renewable energy by the CO_2 emissions per total non-RPS-eligible renewable energy metric calculated above. The estimate provided here and the energy reports issued by PG&E assume that RPS-eligible renewable energy sources do not result in any CO_2 emissions.
6. Global Warming Potentials (GWP) are based on the IPCC Fourth Assessment Report, and are used within version 2016.3.2 of CalEEMod® to report Carbon Dioxide Equivalent emissions estimates.

Table EF1
Energy Usage Emission Factors
Point Molate
Richmond, CA

Notes, Continued:

7. The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-RPS-eligible renewable energy by the CO_2 emissions per total non-RPS-eligible renewable energy metric from PG&E 2015 through 2017 data. The requirements at each Renewable Portfolio Standard (RPS) milestone year are used as a conservative representation of emissions in the relevant operational year; 2024 (44%) toward achieving 60% RPS in 2030 consistent with SB 100. Estimates for 2028 are interpolated based on the RPS milestones between 2024 and 2030. The estimate provided here and the energy reports issued by PG&E assume that RPS-eligible renewable energy sources do not result in any CO_2 emissions. CH_4 and N_2O emission factors are from eGRID2018 (Table 1 for the CAMX subregion), and are conservatively assumed not to change from these estimates. As more renewable energy is integrated into the electricity grid, these intensity factors will also decrease.

Abbreviations:

CalEEMod® - California Emissions Estimator Model
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
CPUC - California Public Utilities Commission
eGRID - Emissions & Generation Resource Integrated Database
GWP - global warming potential
IPCC AR4 - Intergovernmental Panel on Climate Change Fourth Assessment Report
lb - pound(s)
MMBtu - million British Thermal Units
MT - metric ton(s)
MWh - megawatt-hour
N_2O - nitrous oxide
NOx - nitrogen oxides
PG&E - Pacific Gas & Electric
PM - particulate matter
ROG - reactive organic gases
RPS - Renewable Portolio Standard
SB - Senate Bill

References:

The Climate Registry. Available at: https://www.theclimateregistry.org/our-members/cris-public-reports/. Accessed: September 2019.

California Air Pollution Control Officers Association (CAPCOA). California Emissions Estimator Model (CalEEMod®), Version 2016.3.2. Available online at http://www.caleemod.com/

IPCC. 2007. AR4 Climate Change 2007: The Physical Science Basis. Available online at: https://www.ipcc.ch/report/ar4/wg1/

PGE 2015 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2015/PGE_CRSR_2015.pdf.

PGE 2016 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2016/PGE_CRSR_Environment.pdf.

PGE 2017 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2017/assets/PGE_CRSR_2017_Environment.pdf.

Diablo Canyon Decommissioning Engagement Panel. Available at: https://www.pge.com/en_US/safety/how-the-system-works/diablo-canyon-power-plant/diablo-canyon-power-plant/engagement-panel.page

SB-100 California Renewables Portfolio Standard Program. Available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

USEPA. 2018. eGRID2016 Summary Tables. Available at: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid.

Table M1
GHG Emissions Reduction for Residential Electric Vehicle Charging Stations
Project 1 - Residential Heavy
Point Molate, Richmond, CA

Estimating GHG Emissions Reduction from Replacement of Internal Combustion Engine with Electric Vehicle		
PG&E Electricity Emission Factor[1]	0.11	(MT CO_2e/MWh)
Fuel Economy of Electric Vehicle[2]	0.25	(KWh/mile)
Electric Vehicle GHG Emissions	28	(gms/mile)
GHG Emissions for the Residential Miles Traveled as Estimated by CalEEMod®[3]	337	(gms/mile)
GHG Emissions Reduction from Additional Electric Vehicles, per mile	309	(gms/mile)
Estimating Project Residential-Related Traffic GHG Emissions		
Single Family Residential Average Yearly VMT, after TDMs[4]	3,775,297	(miles/year)
Percent of Single Family Residential Miles Driven in Electric Vehicles due to This Measure[5]	10%	
Residential VMT that is Displaced by EVs due to This Measure	377,530	(miles/year)
Estimated Benefit from Residential EV Chargers		
GHG Emissions Reduction from Residential Electric Vehicles[6]	117	(MT CO_2e/year)

Notes:

1. CO_2e intensity factor for PG&E accounts for the 44% projected RPS for 2024, consistent with SB 100.
2. National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
3, The emissions factor (337 gms/mile) is consistent with the CalEEMod® input, and includes default reductions for the ACC Program and Pavley Standards. The emissions factor also is consistent with EMFAC2017's total exhaust emission rate for CO_2e for vehicles in Contra Costa County, as aggregated for all models and speeds, and averaged over all seasons for 2024. To ensure that the Project mitigation's emissions reduction benefit does not take credit for EVs that EMFAC2017 already forecasts will be part of the vehicle fleet, the emissions factor and emissions inventory includes the existing EVs. CalEEMod® conservatively includes medium- and heavy-duty vehicle emissions factors proportional to EMFAC2017's default fleet mix when calculating mobile emissions for all land use types.

   Calculation methodology from EMFAC2017 output: Weighted average exhaust emissions CO_2 (g/mi) = CO_2 exhaust EF (g/day) ÷ Vehicle Miles Traveled (mi/day)
   1. EF from CalEEMod®, used in calculation: 337 g/mi
   2. EF if no EVs were included in CalEEMod®: 344 g/mi

   Available at: http://www.arb.ca.gov/emfac/. Accessed: February 2020.
4. VMT from CalEEMod® modeling is further reduced by 13% to account for a total TDM reduction of 23%, prior to taking credit for the Residential EV Charger mitigation measure.
5. The Project conservatively assumes that 10% of single family residential VMT will be replaced by electric vehicles due to availability of EV Charging.
6. Calculated by multiplying the GHG reduction per mile from additional EVs by the miles displaced by EVs due to this measure.

Abbreviations:

ACC - Advanced Clean Cars
CalEEMod® - CALifornia Emissions Estimator MODel
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
EF - emission factor
EMFAC - California Air Resources Board Emissions Factor Model
EV - electric vehicle
g/gms - gram
GHG - greenhouse gases
kWh - kilowatt-hour
mi - mile
MT - metric tonnes
MWh - megawatt-hour
N_2O - nitrous oxide
TDM - Transportation Demand Management
VMT - vehicle miles traveled

Table M2
Criteria Air Pollutant Emissions Reduction for Residential Electric Vehicle Charging Stations
Project 1 - Residential Heavy
Point Molate, Richmond, CA

I. Exhaust Emission Factors (g/mile)[1, 2]

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Fleet	0.059	0.21	1.05	0.0033	0.0026	0.0024

Residential VMT that is Displaced by EVs due to This Measure[3] **377,530** **(miles/year)**

II. Emission Reductions (lb/day)[4]

VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
0.1	0.5	2	0.01	0.01	0.01

Notes:

1. Fleet-wide emission factors based on EMFAC 2017, for calendar year 2024 in Contra Costa County. Fleet-wide factors are used to be consistent with the CalEEMod® methodology used to develop the emissions inventory.

2. For emission factor determination, emissions from exhaust of the full fleet are included. Idling losses, resting losses and diurnal losses were not included in emission factor calculations. VOC emissions from these factors for conventional vehicles are considerably higher than electric vehicles, and thus this assumption is conservative. Emissions from break wear and tire wear are excluded because they will be roughly the same for the full fleet and electric vehicle fleet.

3. See Table M1 for detailed calculations of the estimated VMT to be driven by electric vehicles due to this measure.

4. Emission reduction calculations are based on VMT estimated to be driven by electric vehicles due to this measure.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel
CO - carbon monoxide
EMFAC - EMission FACtors model
EV - electric vehicle
g - gram
GHG - greenhouse gas
lb - pound
NO_X - oxides of nitrogen
PM_{10} - particulate matter less than 10 microns in diameter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
SO_X - sulfur oxide
VOC - volatile organic compounds
VMT - vehicles miles traveled

Table M3
GHG Emissions Reductions for Commercial Development Area Electric Vehicle Charging Stations
Project 1 - Residential Heavy
Point Molate, Richmond, CA

Estimating GHG Emissions Reduction to Replace Internal Combustion Engine Vehicle with Electric Vehicle		
PG&E electricity emission factor[1]	0.11	(MT CO_2e/MWh)
Fuel Economy of Electric Vehicle[2]	0.25	(kWh/mile)
Electric Vehicle GHG Emissions[3]	28	(gms/mile)
Gasoline/Diesel CO_2e emission while running[4]	272	(gms/mile)
GHG Emissions Reduction from Additional Electric Vehicles, per mile	244	(gms/mile)
Charge Rate[5]	6.25	(kW = kWh/hr)
Number of Hours of Charging per Station per Year[5]	730	(hours)
Annual VMT Displacement per Parking Spot[5]	18,250	(miles/charging station/year)
GHG Reduction per Parking Space with Charging per Year	4	(MT CO2e/charging station/year)
Estimated Benefit from Installing Commercial Electric Vehicle Charging Stations		
Number of On-Site Commercial Parking Spots Provided Chargers[6]	26	(charging stations)
Annual VMT Displacement at On-Site Commercial Stations (Based on Charge)	474,500	(miles/year)
GHG Emissions Reduction from On-Site Commercial Parking Spots[7]	116	(MT CO_2e/year)

Notes:

1. CO_2e intensity factor for PG&E accounts for the 44% projected RPS for 2024, consistent with SB 100.
2. National Renewable Energy Laboratory (NREL), 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
3. Electric vehicle GHG emissions per mile are estimated based on the PG&E electricity emission factor (MT CO_2e/MWh) and the fuel economy of electric vehicles (KWh/mile).
4. CARB, 2015. EMFAC2017, running and starting exhaust emission rate for CO_2 and CH_4 for light duty gasoline- and diesel-powered vehicles in Contra Costa County, aggregated for all models and speeds, averaged over all seasons for 2024. Emission rate includes reductions for Advanced Clean Cars (ACC) and Pavley, though based on the USEPA SAFE rule, this is likely a conservative assumption and the fleet replaced with EVs will be higher-emitting than shown here. Available at: http://www.arb.ca.gov/emfac/. Accessed: February 2020.
5. Annual VMT displacement per parking spot is the total kWh per year multiplied by the fuel economy in miles per kWh. This is equivalent to two hours of charge time per day for a Level 2 charging station that charges at a rate of 25 driving range per hour.
6. Number of charging stations based on installing chargers for the spaces the 2019 CalGreen Tier 1 standards would otherwise require to be "EV-Capable". This assumes 26 parking spaces will be serviced by a charging station. The Project assumes that each commercial land use will have its own parking lots and all parking, including historic buildings will be new. Existing parking is not subject to CalGreen standards.
7. GHG emissions reductions are calculated as the difference between GHG emissions of gasoline/diesel vehicles and GHG emissions of electric vehicles multiplied by the annual VMT displacement charging stations.

Abbreviations:

CARB - California Air Resources Board
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
EIR - Environmental Impact Report
EMFAC - California Air Resources Board Emissions Factor Model
EV - electric vehicle
GHG - greenhouse gases
gms - grams
kWh - kilowatt-hour
MT - metric tonnes
MWh - megawatt-hour
TDM - Transportation Demand Management
VMT - vehicle miles traveled

Table M4
Criteria Air Pollutant Emissions Reductions for Commercial Development Area Electric Vehicle Charging Stations
Project 1 - Residential Heavy
Point Molate, Richmond, CA

Estimating VMT Displacement from Replacement of Internal Combustion Engine with Electric Vehicle		
Description	**Value**	**Units**
Fuel Economy of Electric Vehicle[1]	0.25	(kWh/mile)
Charge Rate[2]	6.25	(kW = kWh/hr)

Estimating VMT Replaced by Electric Vehicles		
Description	**Value**	**Units**
Number of On-Site Commercial Parking Spots Provided Chargers[3]	26	(parking spaces)
Number of Hours of Charging per Station per Year[4]	730	(hours/year)
Annual VMT Displacement from Stations (Based on Charge)[4]	18,250	(miles/charging station/year)
Annual VMT Displacement at On-Site Commercial Stations (Based on Charge)	474,500	(miles/year)

Emissions Reductions						
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Vehicle Emission Factor (g/mile)[5]	0.039	0.066	0.90	0.003	0.0016	0.0015
Emissions Reduction for Gasoline/Diesel Vehicles (lb/day)	0.1	0.2	2.6	7.71E-03	4.63E-03	4.26E-03

Notes:

1. National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
2. Estimated charge rate of 6.25 kW based on capability of existing battery-electric vehicles and Level 2 charging stations.
3, Number of charging stations based on installing chargers for the spaces according to the 2019 CalGreen Tier 1 standards would otherwise require to be "EV-Capable". This assumes 26 parking spaces will be serviced by a charging station. The Project assumes that each commercial land use will have its own parking lot and all parking, including historic buildings will be new. Existing parking is not subject to CalGreen standards.
4. Annual VMT displacement per parking spot is the total kWh per year multiplied by the fuel economy in miles per kWh. This is equivalent to two hours of charge time per day for a Level 2 charging station that charges at a rate of 25 driving range per hour.
5. Emission Factors were based on EMFAC2017 for calendar year 2024 in Contra Costa County. Emission Factors were weighted according to LDA, LDT1 and LDT2 fleet-mix VMT and trips. Only emissions from exhaust are included. All other emissions including heat soak, diurnal, tire wear, break wear, etc. are not considered as these emissions are also expected to occur for electric vehicles. However, emissions from these sources from the conventional fuel fleet are considerably higher than electric vehicles, and thus this omission is conservative. Based on the USEPA SAFE rule, the fleet replaced with EVs will be higher-emitting than shown here, which if incorporated, would increase the GHG benefits of this measure.

Abbreviations:

CAP - criteria air pollutant
CARB - California Air Resources Board
EIR - Environmental Impact Report
EMFAC - EMission FACtors model
EV - electric vehicle
g - gram
lb - pound
kWh - kilowatt-hour
LDA - Light Duty Auto (passenger cars)
LDT - Light Duty trucks
NO_X - oxides of nitrogen
SO_X - sulfur oxide
PM_{10} - particulate matter less than 10 microns in diameter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
VOC - volatile organic compounds
VMT - vehicles miles traveled

Table M5
GHG Emissions Reduction for Residential Electric Vehicle Charging Stations
Project 2 - Commercial Heavy
Point Molate, Richmond, CA

Estimating GHG Emissions Reduction from Replacement of Internal Combustion Engine with Electric Vehicle		
PG&E Electricity Emission Factor[1]	0.11	(MT CO_2e/MWh)
Fuel Economy of Electric Vehicle[2]	0.25	(KWh/mile)
Electric Vehicle GHG Emissions	28	(gms/mile)
GHG Emissions for the Residential Miles Traveled as Estimated by CalEEMod®[3]	337	(gms/mile)
GHG Emissions Reduction from Additional Electric Vehicles, per mile	309	(gms/mile)
Estimating Project Residential-Related Traffic GHG Emissions		
Single Family Residential Average Yearly VMT, after TDMs[4]	3,775,297	(miles/year)
Percent of Single Family Residential Miles Driven in Electric Vehicles due to This Measure[5]	10%	
Residential VMT that is Displaced by EVs due to This Measure	377,530	(miles/year)
Estimated Benefit from Residential EV Chargers		
GHG Emissions Reduction from Residential Electric Vehicles[6]	117	(MT CO_2e/year)

Notes:

1. CO_2e intensity factor for PG&E accounts for the 44% projected RPS for 2024 consistent with SB 100. For purposes of this analysis, zero emission vehicles are assumed to be electric vehicles.
2. National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
3. The emissions factor (337 gms/mile) is consistent with the CalEEMod® input, and includes default reductions for the ACC Program and Pavley Standards. The emissions factor also is consistent with EMFAC2017's total exhaust emission rate for CO_2e for vehicles in Contra Costa County, as aggregated for all models and speeds, and averaged over all seasons for 2024. To ensure that the Project mitigation's emissions reduction benefit does not take credit for EVs that EMFAC2017 already forecasts will be part of the vehicle fleet, the emissions factor and emissions inventory includes the existing EVs. CalEEMod® conservatively includes medium- and heavy-duty vehicle emissions factors proportional to EMFAC2017's default fleet mix when calculating mobile emissions for all land use types.

   Calculation methodology from EMFAC2017 output: Weighted average exhaust emissions CO_2 (g/mi) = CO_2 exhaust EF (g/day) ÷ Vehicle Miles Traveled (mi/day)
   1. EF from CalEEMod®, used in calculation: 337 g/mi
   2. EF if no EVs were included in CalEEMod®: 344 g/mi

   Available at: http://www.arb.ca.gov/emfac/. Accessed: February 2020.
4. VMT from CalEEMod® modeling is further reduced by 13% to account for a total TDM reduction of 23%, prior to taking credit for the Residential EV Charger mitigation measure.
5. The Project conservatively assumes that 10% of single family residential VMT will be replaced by electric vehicles due to availability of EV Charging.
6. Calculated by multiplying the GHG reduction per mile from additional EVs by the miles displaced by EVs due to this measure.

Abbreviations:

ACC - Advanced Clean Cars
CalEEMod® - CALifornia Emissions Estimator MODel
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
EF - emission factor
EMFAC - California Air Resources Board Emissions Factor Model
EV - electric vehicle
g/gms - gram
GHG - greenhouse gases
kWh - kilowatt-hour
mi - mile
MT - metric tonnes
MWh - megawatt-hour
N_2O - nitrous oxide
TDM - Transportation Demand Management
VMT - vehicle miles traveled

Table M6
Criteria Air Pollutant Emissions Reduction for Residential Electric Vehicle Charging Stations
Project 2 - Commercial Heavy
Point Molate, Richmond, CA

I. Exhaust Emission Factors (g/mile)[1, 2]

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Fleet	0.059	0.21	1.05	0.0033	0.0026	0.0024

Residential VMT that is Displaced by EVs due to This Measure[3] **377,530** **(miles/year)**

II. Emission Reductions (lb/day)[4]

VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
0.1	0.5	2	0.01	0.01	0.01

Notes:

1. Fleet-wide emission factors based on EMFAC 2017, for calendar year 2024 in Contra Costa County. Fleet-wide factors are used to be consistent with the CalEEMod® methodology used to develop the emissions inventory.

2. For emission factor determination, emissions from exhaust of the full fleet are included. Idling losses, resting losses and diurnal losses were not included in emission factor calculations. VOC emissions from these factors for conventional vehicles are considerably higher than electric vehicles, and thus this assumption is conservative. Emissions from break wear and tire wear are excluded because they will be roughly the same for the full fleet and electric vehicle fleet.

3. See Table M5 for detailed calculations of the estimated VMT to be driven by electric vehicles due to this measure.

4. Emission reduction calculations are based on VMT estimated to be driven by electric vehicles due to this measure.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MOD
CO - carbon monoxide
EMFAC - EMission FACtors model
EV - electric vehicle
g - gram
GHG - greenhouse gas
lb - pound
NO_X - oxides of nitrogen
PM_{10} - particulate matter less than 10 microns in diameter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
SO_X - sulfur oxide
VOC - volatile organic compounds
VMT - vehicles miles traveled

Table M7
GHG Emissions Reductions for Commercial Development Area Electric Vehicle Charging Stations
Project 2 - Commercial Heavy
Point Molate, Richmond, CA

Estimating GHG Emissions Reduction to Replace Internal Combustion Engine Vehicle with Electric Vehicle		
PG&E electricity emission factor[1]	0.11	(MT CO_2e/MWh)
Fuel Economy of Electric Vehicle[2]	0.25	(kWh/mile)
Electric Vehicle GHG Emissions[3]	28	(gms/mile)
Gasoline/Diesel CO_2e emission while running[4]	272	(gms/mile)
GHG Emissions Reduction from Additional Electric Vehicles, per mile	244	(gms/mile)
Charge Rate[5]	6.25	(kW = kWh/hr)
Number of Hours of Charging per Station per Year[5]	730	(hours)
Annual VMT Displacement per Parking Spot[5]	18,250	(miles/charging station/year)
GHG Reduction per Parking Space with Charging per Year	4	(MT CO2e/charging station/year)
Estimated Benefit from Installing Commercial Electric Vehicle Charging Stations		
Number of On-Site Commercial Parking Spots Provided Chargers[6]	120	(charging stations)
Annual VMT Displacement at On-Site Commercial Stations (Based on Charge)	2,190,000	(miles/year)
GHG Emissions Reduction from On-Site Commercial Parking Spots[7]	534	(MT CO_2e/year)

Notes:

1. CO_2e intensity factor for PG&E accounts for the 44% projected RPS for 2024 consistent with SB 100.
2. National Renewable Energy Laboratory (NREL), 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
3. Electric vehicle GHG emissions per mile are estimated based on the PG&E electricity emission factor (MT CO_2e/MWh) and the fuel economy of electric vehicles (KWh/mile).
4. CARB, 2015. EMFAC2017, running and starting exhaust emission rate for CO_2 and CH_4 for light duty gasoline- and diesel-powered vehicles in Contra Costa County, aggregated for all models and speeds, averaged over all seasons for 2024. Emission rate includes reductions for Advanced Clean Cars (ACC) and Pavley, though based on the USEPA SAFE rule, this is likely a conservative assumption and the fleet replaced with EVs will be higher-emitting than shown here. Available at: http://www.arb.ca.gov/emfac/. Accessed: February 2020.
5. Annual VMT displacement per parking spot is the total kWh per year multiplied by the fuel economy in miles per kWh. This is equivalent to two hours of charge time per day for a Level 2 charging station that charges at a rate of 25 driving range per hour.
6. Number of charging stations based on installing chargers for the spaces the 2019 CalGreen Tier 1 standards would otherwise require to be "EV-Capable". This assumes 120 parking spaces will be serviced by a charging station. The Project assumes that each commercial land use will have its own parking lots and all parking, including historic buildings will be new. Existing parking is not subject to CalGreen standards.
7. GHG emissions reductions are calculated as the difference between GHG emissions of gasoline/diesel vehicles and GHG emissions of electric vehicles multiplied by the annual VMT displacement charging stations.

Abbreviations:

CARB - California Air Resources Board
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
EIR - Environmental Impact Report
EMFAC - California Air Resources Board Emissions Factor Model
EV - electric vehicle
GHG - greenhouse gases
gms - grams
kWh - kilowatt-hour
MT - metric tonnes
MWh - megawatt-hour
TDM - Transportation Demand Management
VMT - vehicle miles traveled

Table M8
Criteria Air Pollutant Emissions Reductions for Commercial Development Area Electric Vehicle Charging Stations
Project 2 - Commercial Heavy
Point Molate, Richmond, CA

Estimating VMT Displacement from Replacement of Internal Combustion Engine with Electric Vehicle		
Description	**Value**	**Units**
Fuel Economy of Electric Vehicle[1]	0.25	(kWh/mile)
Charge Rate[2]	6.25	(kW = kWh/hr)

Estimating VMT Replaced by Electric Vehicles		
Description	**Value**	**Units**
Number of On-Site Commercial Parking Spots Provided Chargers[3]	120	(parking spaces)
Number of Hours of Charging per Station per Year[4]	730	(hours/year)
Annual VMT Displacement from Stations (Based on Charge)[4]	18,250	(miles/charging station/year)
Annual VMT Displacement at On-Site Commercial Stations (Based on Charge)	2,190,000	(miles/year)

Emissions Reductions						
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Vehicle Emission Factor (g/mile)[5]	0.039	0.066	0.90	0.003	0.0016	0.0015
Emissions Reduction for Gasoline/Diesel Vehicles (lb/day)	0.5	0.9	11.9	0.0	0.0	0.0

Notes:

1. National Renewable Energy Laboratory (NREL). 2018. California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025 (Table C.1). Available at: https://www.nrel.gov/docs/fy18osti/70893.pdf. Accessed: November 2019.
2. Estimated charge rate of 6.25 kW based on capability of existing battery-electric vehicles and Level 2 charging stations.
3. Number of charging stations based on installing chargers for the spaces according to the 2019 CalGreen Tier 1 standards would otherwise require to be "EV-Capable". This assumes 120 parking spaces will be serviced by a charging station. The Project assumes that each commercial land use will have its own parking lot and all parking, including historic buildings will be new. Existing parking is not subject to CalGreen standards.
4. Annual VMT displacement per parking spot is the total kWh per year multiplied by the fuel economy in miles per kWh. This is equivalent to two hours of charge time per day for a Level 2 charging station that charges at a rate of 25 driving range per hour.
5. Emission Factors were based on EMFAC2017 for calendar year 2024 in Contra Costa County. Emission Factors were weighted according to LDA, LDT1 and LDT2 fleet-mix VMT and trips. Only emissions from exhaust are included. All other emissions including heat soak, diurnal, tire wear, break wear, etc. are not considered as these emissions are also expected to occur for electric vehicles. However, emissions from these sources from the conventional fuel fleet are considerably higher than electric vehicles, and thus this omission is conservative. Based on the USEPA SAFE rule, the fleet replaced with EVs will be higher-emitting than shown here, which if incorporated, would increase the GHG benefits of this measure.

Abbreviations:

CAP - criteria air pollutant
CARB - California Air Resources Board
EIR - Environmental Impact Report
EMFAC - EMission FACtors model
EV - electric vehicle
g - gram
lb - pound
kWh - kilowatt-hour
LDA - Light Duty Auto (passenger cars)
LDT - Light Duty trucks
NO_X - oxides of nitrogen
SO_X - sulfur oxide
PM_{10} - particulate matter less than 10 microns in diameter
$PM_{2.5}$ - particulate matter less than 2.5 microns in diameter
VOC - volatile organic compounds
VMT - vehicles miles traveled

CalEEMod Outputs

Point Molate - Residential Heavy - Full Build Out with Mitigation

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking Structure	100.00	Space	0.00	40,000.00	0
City Park	30.00	Acre	30.00	1,306,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Apartments Low Rise	286.00	Dwelling Unit	8.97	286,000.00	818
Apartments Low Rise	350.00	Dwelling Unit	10.98	350,000.00	1001
Apartments Mid Rise	350.00	Dwelling Unit	4.62	350,000.00	1001
Apartments Mid Rise	473.00	Dwelling Unit	6.24	473,000.00	1353
Apartments Mid Rise	307.00	Dwelling Unit	4.05	307,000.00	878
Single Family Housing	274.00	Dwelling Unit	44.65	493,200.00	784
Convenience Market (24 Hour)	5.00	1000sqft	0.00	5,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				

CO2 Intensity (lb/MWhr)	248.57	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project operational year = 2024. Updated electricity emission factors to incorporate RPS for 2024.

Land Use - CalEEMod acerage scaled to match project acerage of 80 acres for Residential , retail and restaurant.

Construction Phase - Construction duration is from 2/1/2021 to 11/30/2028 based on Suncal schedule. Total construction days match inputs provided by AES. Exact start and end dates are defined by CalEEMod and won't exactly match AES/SunCal inputs

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment - Construction equipment updated to match inputs provided by developer/AES.

Off-road Equipment -

Off-road Equipment - Construction equipment updated to match inputs provided by developer/AES.

Off-road Equipment -

Trips and VMT - CalEEMod default trip rates

Demolition - Input provided by AES/developer.

Grading - Total soil quantity exported is 355,000 cu yd. Grading area for bay trail development is 2.73 acres. Grading area for project is 90 acres.

Road Dust - 0.047 g/m2 sL

Woodstoves - 600 Natural Gas fireplaces to be installed with the project.

Consumer Products - VOC emission factors updated to be county-specific VOC factors.

Landscape Equipment - Total landscaping days set to zero

Energy Use - 2019 Title-24 energy reductions applied to energy intensity factors for non-historical buildings. Rooftop PV is required to match total energy usage for Low-rise and Single Family units.

Area Mitigation - Assuming "super-compliant" VOC paint for indoor and outdoor coatings - EFs from SCAQMD Rule 1113.

Energy Mitigation - Applying energy efficient appliances to residential units and restaurant.

Water Mitigation - Applying low-flow faucets, toilets and showers for indoor water use, with default reduction percentages.

Waste Mitigation - Applying 50% solid waste reduction measure.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	10

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	10
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Point Molate - Residential Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	78.00
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	NumDays	310.00	262.00
tblConstructionPhase	NumDays	220.00	125.00
tblConstructionPhase	NumDays	120.00	89.00
tblConsumerProducts	ROG_EF	2.14E-05	1.55E-05
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	LightingElect	741.44	698.33
tblEnergyUse	LightingElect	4.88	5.88
tblEnergyUse	LightingElect	5.34	5.61
tblEnergyUse	LightingElect	4.88	5.12
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	1.75	1.14
tblEnergyUse	NT24E	3,172.76	0.00
tblEnergyUse	NT24E	3,054.10	2,848.06
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	2,615.00	2,216.09
tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	NT24NG	128.02	128.00

tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	T24E	233.06	0.00
tblEnergyUse	T24E	426.45	385.82
tblEnergyUse	T24E	2.24	2.90
tblEnergyUse	T24E	2.67	2.90
tblEnergyUse	T24E	2.24	2.45
tblEnergyUse	T24E	217.68	0.00
tblEnergyUse	T24NG	17,734.50	16,901.46
tblEnergyUse	T24NG	6,115.43	6,625.17
tblEnergyUse	T24NG	3.90	5.00
tblEnergyUse	T24NG	39.90	41.30
tblEnergyUse	T24NG	3.90	4.48
tblEnergyUse	T24NG	39,708.76	35,976.35
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	95.40	600.00
tblFireplaces	NumberGas	169.50	0.00
tblFireplaces	NumberGas	68.50	0.00
tblFireplaces	NumberNoFireplace	25.44	0.00
tblFireplaces	NumberNoFireplace	45.20	0.00
tblFireplaces	NumberNoFireplace	21.92	0.00
tblFireplaces	NumberWood	108.12	0.00

tblFireplaces	NumberWood	192.10	0.00
tblFireplaces	NumberWood	117.82	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.18	0.18

tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003

tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01

tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblGrading	AcresOfGrading	1,696.50	90.00
tblGrading	AcresOfGrading	622.25	2.73

tblGrading	MaterialExported	0.00	344,550.00
tblGrading	MaterialExported	0.00	10,450.00
tblLandUse	LotAcreage	0.90	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	17.88	8.97
tblLandUse	LotAcreage	21.88	10.98
tblLandUse	LotAcreage	8.08	4.05
tblLandUse	LotAcreage	9.21	4.62
tblLandUse	LotAcreage	12.45	6.24
tblLandUse	LotAcreage	88.96	44.65
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblOffRoadEquipment	HorsePower	402.00	367.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	641.35	248.57
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004

tblRoadDust	RoadSiltLoading	0.1	0.047
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblVehicleEF	HHD	0.41	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.58	6.28
tblVehicleEF	HHD	0.84	0.40
tblVehicleEF	HHD	2.87	5.3000e-003
tblVehicleEF	HHD	4,335.05	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.83	5.34
tblVehicleEF	HHD	1.90	2.66
tblVehicleEF	HHD	19.75	2.36
tblVehicleEF	HHD	7.9210e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02

tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	7.5790e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.41	0.42
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3500e-004	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.39	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.15	6.28

tblVehicleEF	HHD	0.85	0.40
tblVehicleEF	HHD	2.61	5.3000e-003
tblVehicleEF	HHD	4,592.60	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	14.28	5.34
tblVehicleEF	HHD	1.83	2.66
tblVehicleEF	HHD	19.74	2.36
tblVehicleEF	HHD	6.6780e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	6.3890e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.39	0.42
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	1.3100e-004	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.45	0.49
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.45	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.17	6.28
tblVehicleEF	HHD	0.83	0.40
tblVehicleEF	HHD	3.11	5.3000e-003
tblVehicleEF	HHD	3,979.39	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.22	5.34
tblVehicleEF	HHD	1.93	2.66
tblVehicleEF	HHD	19.77	2.36
tblVehicleEF	HHD	9.6380e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	9.2210e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3900e-004	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.51	0.49
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	LDA	3.2820e-003	1.8000e-003
tblVehicleEF	LDA	4.5120e-003	0.05
tblVehicleEF	LDA	0.48	0.52
tblVehicleEF	LDA	1.04	2.15
tblVehicleEF	LDA	229.87	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03

tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.2620e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3010e-003	2.4000e-003
tblVehicleEF	LDA	5.4600e-004	5.0000e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	3.7280e-003	1.8000e-003
tblVehicleEF	LDA	3.6390e-003	0.05
tblVehicleEF	LDA	0.58	0.52
tblVehicleEF	LDA	0.80	2.15
tblVehicleEF	LDA	251.31	239.59
tblVehicleEF	LDA	52.85	50.81

tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	9.3650e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.21
tblVehicleEF	LDA	2.5170e-003	2.4000e-003
tblVehicleEF	LDA	5.4200e-004	5.0000e-004
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.23
tblVehicleEF	LDA	3.1830e-003	1.8000e-003
tblVehicleEF	LDA	5.1540e-003	0.05
tblVehicleEF	LDA	0.47	0.52
tblVehicleEF	LDA	1.24	2.15
tblVehicleEF	LDA	226.93	239.59

tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	8.0170e-003	6.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.2720e-003	2.4000e-003
tblVehicleEF	LDA	5.4900e-004	5.0000e-004
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDT1	6.8390e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.88	0.87
tblVehicleEF	LDT1	2.31	2.34

tblVehicleEF	LDT1	287.67	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.13	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.15	0.32
tblVehicleEF	LDT1	2.8860e-003	2.8000e-003
tblVehicleEF	LDT1	7.0800e-004	6.0000e-004
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.16	0.35
tblVehicleEF	LDT1	7.6930e-003	3.8000e-003
tblVehicleEF	LDT1	8.8990e-003	0.07
tblVehicleEF	LDT1	1.05	0.87

tblVehicleEF	LDT1	1.76	2.34
tblVehicleEF	LDT1	313.61	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.11	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	3.1480e-003	2.8000e-003
tblVehicleEF	LDT1	6.9900e-004	6.0000e-004
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.13	0.35
tblVehicleEF	LDT1	6.6770e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07

tblVehicleEF	LDT1	0.87	0.87
tblVehicleEF	LDT1	2.76	2.34
tblVehicleEF	LDT1	284.11	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.10	0.07
tblVehicleEF	LDT1	0.14	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	2.8500e-003	2.8000e-003
tblVehicleEF	LDT1	7.1600e-004	6.0000e-004
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.19	0.35
tblVehicleEF	LDT2	4.4150e-003	2.9000e-003

tblVehicleEF	LDT2	5.8360e-003	0.06
tblVehicleEF	LDT2	0.62	0.70
tblVehicleEF	LDT2	1.34	2.74
tblVehicleEF	LDT2	323.78	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	3.2420e-003	3.0000e-003
tblVehicleEF	LDT2	7.6900e-004	7.0000e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.09	0.32

tblVehicleEF	LDT2	5.0080e-003	2.9000e-003
tblVehicleEF	LDT2	4.7080e-003	0.06
tblVehicleEF	LDT2	0.75	0.70
tblVehicleEF	LDT2	1.03	2.74
tblVehicleEF	LDT2	353.38	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.08	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	3.5390e-003	3.0000e-003
tblVehicleEF	LDT2	7.6400e-004	7.0000e-004
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05

tblVehicleEF	LDT2	0.07	0.32
tblVehicleEF	LDT2	4.2820e-003	2.9000e-003
tblVehicleEF	LDT2	6.6640e-003	0.06
tblVehicleEF	LDT2	0.60	0.70
tblVehicleEF	LDT2	1.58	2.74
tblVehicleEF	LDT2	319.73	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.2010e-003	3.0000e-003
tblVehicleEF	LDT2	7.7400e-004	7.0000e-004
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.99	0.77
tblVehicleEF	LHD1	2.29	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.39	0.94
tblVehicleEF	LHD1	0.94	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4200e-004	1.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	1.01	0.77
tblVehicleEF	LHD1	2.10	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.33	0.94
tblVehicleEF	LHD1	0.87	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004

tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.3800e-004	1.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.16	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.24	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003

tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.98	0.77
tblVehicleEF	LHD1	2.47	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.42	0.94
tblVehicleEF	LHD1	1.00	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.35	0.20

tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4500e-004	1.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.0300e-003	6.9000e-003
tblVehicleEF	LHD2	5.6740e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	1.02	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.77	0.98
tblVehicleEF	LHD2	0.40	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4300e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.1180e-003	6.9000e-003
tblVehicleEF	LHD2	5.3450e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	0.94	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.74	0.98
tblVehicleEF	LHD2	0.38	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003

tblVehicleEF	LHD2	2.4200e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	6.9590e-003	6.9000e-003
tblVehicleEF	LHD2	5.9550e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.55	0.64
tblVehicleEF	LHD2	1.09	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.78	0.98
tblVehicleEF	LHD2	0.42	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	MCY	0.46	0.34
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.70	20.00
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.16	1.16

tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.27	2.29
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	2.1230e-003	2.1000e-003
tblVehicleEF	MCY	6.8900e-004	6.0000e-004
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.81	2.82
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.43	2.15
tblVehicleEF	MCY	0.44	0.34
tblVehicleEF	MCY	0.13	0.26
tblVehicleEF	MCY	18.98	20.00
tblVehicleEF	MCY	8.86	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71

tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.29	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.18	2.29
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.83	1.98
tblVehicleEF	MCY	2.1090e-003	2.1000e-003
tblVehicleEF	MCY	6.5400e-004	6.0000e-004
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.70	2.82
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.99	2.15
tblVehicleEF	MCY	0.47	0.34
tblVehicleEF	MCY	0.19	0.26
tblVehicleEF	MCY	21.47	20.00
tblVehicleEF	MCY	11.78	9.07
tblVehicleEF	MCY	173.46	213.40

tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.25	1.16
tblVehicleEF	MCY	0.35	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.37	2.29
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.62	1.98
tblVehicleEF	MCY	2.1550e-003	2.1000e-003
tblVehicleEF	MCY	7.2600e-004	6.0000e-004
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.94	2.82
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.85	2.15
tblVehicleEF	MDV	8.6020e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.97	0.82
tblVehicleEF	MDV	2.71	3.10

tblVehicleEF	MDV	443.89	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4430e-003	3.8000e-003
tblVehicleEF	MDV	1.0620e-003	8.0000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MDV	9.7400e-003	3.8000e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.18	0.82

tblVehicleEF	MDV	2.08	3.10
tblVehicleEF	MDV	483.31	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.21	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.16	0.38
tblVehicleEF	MDV	4.8400e-003	3.8000e-003
tblVehicleEF	MDV	1.0500e-003	8.0000e-004
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.18	0.42
tblVehicleEF	MDV	8.3570e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	0.96	0.82
tblVehicleEF	MDV	3.22	3.10
tblVehicleEF	MDV	438.49	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.26	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.23	0.38
tblVehicleEF	MDV	4.3890e-003	3.8000e-003
tblVehicleEF	MDV	1.0710e-003	8.0000e-004
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.25	0.42
tblVehicleEF	MH	0.02	9.3000e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.46	0.85
tblVehicleEF	MH	4.96	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.34	1.52
tblVehicleEF	MH	0.78	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6600e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.10	0.08

tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.52	0.85
tblVehicleEF	MH	4.45	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.26	1.52
tblVehicleEF	MH	0.72	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.27	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58

tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.41	0.85
tblVehicleEF	MH	5.39	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.38	1.52
tblVehicleEF	MH	0.83	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.31	0.09

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7400e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.4400e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.37	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.47	1.19
tblVehicleEF	MHD	134.03	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.38	0.52
tblVehicleEF	MHD	1.11	1.47
tblVehicleEF	MHD	10.23	1.66
tblVehicleEF	MHD	1.4100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.3500e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003

tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	MHD	1.2910e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0200e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	0.01	4.0000e-003
tblVehicleEF	MHD	4.5430e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.43
tblVehicleEF	MHD	0.36	0.27
tblVehicleEF	MHD	4.98	1.19
tblVehicleEF	MHD	142.13	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07

tblVehicleEF	MHD	0.40	0.52
tblVehicleEF	MHD	1.07	1.47
tblVehicleEF	MHD	10.17	1.66
tblVehicleEF	MHD	1.1900e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.1400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.31	0.05
tblVehicleEF	MHD	1.3670e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9400e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02

tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.3600e-003	2.1000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.94	1.19
tblVehicleEF	MHD	123.22	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.37	0.52
tblVehicleEF	MHD	1.13	1.47
tblVehicleEF	MHD	10.28	1.66
tblVehicleEF	MHD	1.7100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.6400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.35	0.05

tblVehicleEF	MHD	1.1890e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1000e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.38	0.06
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.3020e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.53	0.98
tblVehicleEF	OBUS	5.50	2.88
tblVehicleEF	OBUS	71.68	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.14	0.23
tblVehicleEF	OBUS	0.75	1.13
tblVehicleEF	OBUS	2.17	0.68
tblVehicleEF	OBUS	1.3000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.2000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06

tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.34	0.14
tblVehicleEF	OBUS	6.9600e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8700e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.37	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.5680e-003	9.0000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.55	0.98
tblVehicleEF	OBUS	4.94	2.88
tblVehicleEF	OBUS	74.94	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24

tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.15	0.23
tblVehicleEF	OBUS	0.71	1.13
tblVehicleEF	OBUS	2.10	0.68
tblVehicleEF	OBUS	1.1000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.0000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.32	0.14
tblVehicleEF	OBUS	7.2700e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7700e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.35	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.0920e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.50
tblVehicleEF	OBUS	0.52	0.98
tblVehicleEF	OBUS	5.95	2.88
tblVehicleEF	OBUS	67.19	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.13	0.23
tblVehicleEF	OBUS	0.77	1.13
tblVehicleEF	OBUS	2.23	0.68
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	6.5300e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9500e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.39	0.15
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1030e-003	2.6000e-003
tblVehicleEF	SBUS	0.06	1.3000e-003
tblVehicleEF	SBUS	2.09	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.33	0.19
tblVehicleEF	SBUS	1,440.18	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.22	2.23
tblVehicleEF	SBUS	4.78	2.75
tblVehicleEF	SBUS	19.18	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02

tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2700e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	8.0000e-003
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1440e-003	2.6000e-003
tblVehicleEF	SBUS	0.05	1.3000e-003
tblVehicleEF	SBUS	1.93	1.26
tblVehicleEF	SBUS	0.40	0.22

tblVehicleEF	SBUS	0.91	0.19
tblVehicleEF	SBUS	1,522.68	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.64	2.23
tblVehicleEF	SBUS	4.59	2.75
tblVehicleEF	SBUS	19.17	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	9.5970e-003	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.24	0.09
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.05	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2100e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004

tblVehicleEF	SBUS	0.33	0.12
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.06	8.0000e-003
tblVehicleEF	SBUS	0.88	0.02
tblVehicleEF	SBUS	6.0730e-003	2.6000e-003
tblVehicleEF	SBUS	0.07	1.3000e-003
tblVehicleEF	SBUS	2.33	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.66	0.19
tblVehicleEF	SBUS	1,326.25	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	12.63	2.23
tblVehicleEF	SBUS	4.86	2.75
tblVehicleEF	SBUS	19.19	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004

tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.3300e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	8.0000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.07	1.5000e-003
tblVehicleEF	UBUS	4.04	8.13
tblVehicleEF	UBUS	11.74	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.66	0.64
tblVehicleEF	UBUS	12.20	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00

tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.98	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7290e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.65	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	1.08	5.8000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.06	1.5000e-003
tblVehicleEF	UBUS	4.11	8.13
tblVehicleEF	UBUS	9.17	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.41	0.64
tblVehicleEF	UBUS	12.07	0.03
tblVehicleEF	UBUS	0.49	0.08

tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.39	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.85	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.6840e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.66	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.93	5.8000e-003
tblVehicleEF	UBUS	0.23	1.10
tblVehicleEF	UBUS	0.08	1.5000e-003
tblVehicleEF	UBUS	4.00	8.13
tblVehicleEF	UBUS	14.08	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75

tblVehicleEF	UBUS	5.77	0.64
tblVehicleEF	UBUS	12.31	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.10	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7700e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.64	1.12
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.20	5.8000e-003
tblVehicleTrips	CC_TTP	0.00	80.10
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.90

tblVehicleTrips	DV_TP	0.00	15.00
tblVehicleTrips	PB_TP	0.00	61.00
tblVehicleTrips	PR_TP	0.00	24.00
tblVehicleTrips	ST_TR	7.16	5.87
tblVehicleTrips	ST_TR	6.39	3.77
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	94.36	24.19
tblVehicleTrips	ST_TR	49.97	26.98
tblVehicleTrips	ST_TR	9.91	7.19
tblVehicleTrips	ST_TR	0.00	2.02
tblVehicleTrips	SU_TR	6.07	4.97
tblVehicleTrips	SU_TR	5.86	3.46
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	72.16	18.50
tblVehicleTrips	SU_TR	25.24	13.63
tblVehicleTrips	SU_TR	8.62	6.26
tblVehicleTrips	SU_TR	0.00	2.02
tblVehicleTrips	WD_TR	6.59	5.40
tblVehicleTrips	WD_TR	6.65	3.93
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	89.95	23.06
tblVehicleTrips	WD_TR	42.70	23.06
tblVehicleTrips	WD_TR	9.52	6.91
tblVehicleTrips	WD_TR	0.00	2.02
tblWater	OutdoorWaterUseRate	38,997,184.57	0.00
tblWoodstoves	NumberCatalytic	12.72	0.00
tblWoodstoves	NumberCatalytic	22.60	0.00

tblWoodstoves	NumberCatalytic	10.96	0.00
tblWoodstoves	NumberNoncatalytic	12.72	0.00
tblWoodstoves	NumberNoncatalytic	22.60	0.00
tblWoodstoves	NumberNoncatalytic	10.96	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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					
2021	1.2161	16.2072	8.5517	0.0283	1.8677	0.5252	2.3929	0.8817	0.4842	1.3658	0.0000	2,597.7828	2,597.7828	0.4832	0.0000	2,609.8618
2022	0.7771	8.8607	6.3025	0.0185	1.1548	0.3089	1.4637	0.4889	0.2845	0.7734	0.0000	1,665.0865	1,665.0865	0.3862	0.0000	1,674.7403
2023	13.8535	8.0501	10.0238	0.0409	2.7108	0.1637	2.8746	0.7573	0.1547	0.9120	0.0000	3,759.6173	3,759.6173	0.2094	0.0000	3,764.8524
2024	4.5389	6.7742	8.3545	0.0372	2.5196	0.1044	2.6240	0.6794	0.0984	0.7778	0.0000	3,430.0241	3,430.0241	0.1582	0.0000	3,433.9797
2025	0.9266	6.3971	7.6609	0.0356	2.4721	0.0864	2.5586	0.6667	0.0811	0.7479	0.0000	3,290.3063	3,290.3063	0.1511	0.0000	3,294.0837
2026	0.8897	6.3038	7.3274	0.0349	2.4721	0.0860	2.5581	0.6667	0.0807	0.7474	0.0000	3,225.3222	3,225.3222	0.1474	0.0000	3,229.0060
2027	0.8548	6.2134	7.0366	0.0343	2.4721	0.0852	2.5573	0.6667	0.0800	0.7467	0.0000	3,167.4309	3,167.4309	0.1440	0.0000	3,171.0301
2028	0.7510	5.6194	6.2147	0.0309	2.2638	0.0772	2.3409	0.6105	0.0725	0.6830	0.0000	2,854.2982	2,854.2982	0.1291	0.0000	2,857.5262
Maximum	**13.8535**	**16.2072**	**10.0238**	**0.0409**	**2.7108**	**0.5252**	**2.8746**	**0.8817**	**0.4842**	**1.3658**	**0.0000**	**3,759.6173**	**3,759.6173**	**0.4832**	**0.0000**	**3,764.8524**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4376	6.6648	8.7730	0.0283	1.0488	0.0969	1.1457	0.4528	0.0913	0.5441	0.0000	2,597.7812	2,597.7812	0.4832	0.0000	2,609.8602
2022	0.3649	3.8941	7.0339	0.0185	0.7387	0.1010	0.8398	0.2765	0.0944	0.3709	0.0000	1,665.0852	1,665.0852	0.3862	0.0000	1,674.7389
2023	13.5888	5.5257	10.3178	0.0409	2.6563	0.0329	2.6892	0.7278	0.0312	0.7590	0.0000	3,759.6167	3,759.6167	0.2094	0.0000	3,764.8517
2024	4.3745	5.2011	8.5261	0.0372	2.5196	0.0239	2.5436	0.6794	0.0227	0.7021	0.0000	3,430.0237	3,430.0237	0.1582	0.0000	3,433.9793
2025	0.7910	5.0614	7.8404	0.0356	2.4721	0.0229	2.4950	0.6667	0.0217	0.6884	0.0000	3,290.3060	3,290.3060	0.1511	0.0000	3,294.0834
2026	0.7540	4.9682	7.5069	0.0349	2.4721	0.0224	2.4946	0.6667	0.0212	0.6880	0.0000	3,225.3219	3,225.3219	0.1474	0.0000	3,229.0056
2027	0.7192	4.8778	7.2161	0.0343	2.4721	0.0217	2.4938	0.6667	0.0206	0.6873	0.0000	3,167.4305	3,167.4305	0.1440	0.0000	3,171.0297
2028	0.6268	4.3963	6.3791	0.0309	2.2638	0.0190	2.2828	0.6105	0.0180	0.6286	0.0000	2,854.2979	2,854.2979	0.1291	0.0000	2,857.5258
Maximum	**13.5888**	**6.6648**	**10.3178**	**0.0409**	**2.6563**	**0.1010**	**2.6892**	**0.7278**	**0.0944**	**0.7590**	**0.0000**	**3,759.6167**	**3,759.6167**	**0.4832**	**0.0000**	**3,764.8517**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.03**	**37.00**	**-3.45**	**0.00**	**7.19**	**76.28**	**12.32**	**12.38**	**75.97**	**24.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	3.6175	0.8996
2	**5-1-2021**	**7-31-2021**	5.8880	2.3394

3	**8-1-2021**	**10-31-2021**	4.6736	2.2709
4	**11-1-2021**	**1-31-2022**	5.0925	2.4874
5	**2-1-2022**	**4-30-2022**	4.8333	2.2298
6	**5-1-2022**	**7-31-2022**	1.6509	0.6295
7	**8-1-2022**	**10-31-2022**	1.4097	0.3883
8	**11-1-2022**	**1-31-2023**	2.2788	1.1031
9	**2-1-2023**	**4-30-2023**	2.3358	1.6268
10	**5-1-2023**	**7-31-2023**	1.9818	1.5416
11	**8-1-2023**	**10-31-2023**	8.6904	8.0174
12	**11-1-2023**	**1-31-2024**	12.0841	11.3127
13	**2-1-2024**	**4-30-2024**	1.9981	1.5975
14	**5-1-2024**	**7-31-2024**	1.9090	1.5031
15	**8-1-2024**	**10-31-2024**	1.9199	1.5140
16	**11-1-2024**	**1-31-2025**	1.9168	1.5229
17	**2-1-2025**	**4-30-2025**	1.7975	1.4391
18	**5-1-2025**	**7-31-2025**	1.8380	1.4676
19	**8-1-2025**	**10-31-2025**	1.8482	1.4778
20	**11-1-2025**	**1-31-2026**	1.8568	1.4863
21	**2-1-2026**	**4-30-2026**	1.7649	1.4066
22	**5-1-2026**	**7-31-2026**	1.8055	1.4350
23	**8-1-2026**	**10-31-2026**	1.8151	1.4447
24	**11-1-2026**	**1-31-2027**	1.8230	1.4525
25	**2-1-2027**	**4-30-2027**	1.7336	1.3753
26	**5-1-2027**	**7-31-2027**	1.7742	1.4038
27	**8-1-2027**	**10-31-2027**	1.7833	1.4128
28	**11-1-2027**	**1-31-2028**	1.7912	1.4208
29	**2-1-2028**	**4-30-2028**	1.7249	1.3625

30	**5-1-2028**	**7-31-2028**	1.7463	1.3759
31	**8-1-2028**	**9-30-2028**	1.1579	0.9123
		Highest	12.0841	11.3127

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.1638	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	2,552.0243	2,552.0243	0.1175	0.0454	2,568.5017
Mobile	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	243.3314	0.0000	243.3314	14.3805	0.0000	602.8431
Water						0.0000	0.0000		0.0000	0.0000	44.6810	119.5904	164.2714	4.6050	0.1103	312.2623
Total	**11.3156**	**7.9705**	**31.5878**	**0.1019**	**5.1905**	**0.2214**	**5.4119**	**1.4743**	**0.2166**	**1.6909**	**288.0124**	**11,170.3306**	**11,458.3429**	**19.4893**	**0.1585**	**11,992.7977**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6934	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	2,535.2112	2,535.2112	0.1153	0.0452	2,551.5523
Mobile	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	121.6657	0.0000	121.6657	7.1902	0.0000	301.4216
Water						0.0000	0.0000		0.0000	0.0000	35.7448	88.9388	124.6836	3.6831	0.0881	243.0217
Total	**9.8452**	**7.9705**	**31.5878**	**0.1019**	**5.1905**	**0.2214**	**5.4119**	**1.4743**	**0.2166**	**1.6909**	**157.4105**	**11,122.8659**	**11,280.2764**	**11.3749**	**0.1360**	**11,605.1860**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**45.35**	**0.42**	**1.55**	**41.63**	**14.15**	**3.23**

3.0 Construction Detail

Construction Phase

Point Molate - Residential Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2021	5/19/2021	5	78	
2	Site Preparation	Site Preparation	3/1/2021	7/1/2021	5	89	
3	Grading	Grading	4/1/2021	3/31/2022	5	261	
4	Paving	Paving	1/1/2022	6/24/2022	5	125	
5	Bay Trail Grading	Grading	3/1/2022	3/1/2023	5	262	
6	Building Construction	Building Construction	12/23/2022	11/30/2028	5	1550	
7	Architectural Coating	Architectural Coating	9/1/2023	2/1/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 4,574,880; Residential Outdoor: 1,524,960; Non-Residential Indoor: 67,500; Non-Residential Outdoor: 22,500; Striped Parking Area: 2,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Bay Trail Grading	Excavators	1	6.00	158	0.38
Bay Trail Grading	Graders	1	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	1	8.00	367	0.48
Bay Trail Grading	Paving Equipment	1	8.00	132	0.36
Bay Trail Grading	Plate Compactors	1	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	1	6.00	247	0.40
Bay Trail Grading	Scrapers	2	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	8	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
Demolition	6	15.00	0.00	227.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	43,069.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	9	23.00	0.00	1,306.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,002.00	466.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	400.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0246	0.0000	0.0246	3.7300e-003	0.0000	3.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1234	1.2262	0.8410	1.5100e-003		0.0605	0.0605		0.0562	0.0562	0.0000	132.6031	132.6031	0.0373	0.0000	133.5361
Total	**0.1234**	**1.2262**	**0.8410**	**1.5100e-003**	**0.0246**	**0.0605**	**0.0851**	**3.7300e-003**	**0.0562**	**0.0599**	**0.0000**	**132.6031**	**132.6031**	**0.0373**	**0.0000**	**133.5361**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	1.6800e-003	0.0000	1.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0180	0.0781	0.9079	1.5100e-003		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	132.6029	132.6029	0.0373	0.0000	133.5360
Total	**0.0180**	**0.0781**	**0.9079**	**1.5100e-003**	**0.0111**	**2.4000e-003**	**0.0135**	**1.6800e-003**	**2.4000e-003**	**4.0800e-003**	**0.0000**	**132.6029**	**132.6029**	**0.0373**	**0.0000**	**133.5360**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

3.3 Site Preparation - 2021

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					0.8040	0.0000	0.8040	0.4419	0.0000	0.4419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1730	1.8021	0.9414	1.6900e-003		0.0910	0.0910		0.0837	0.0837	0.0000	148.7889	148.7889	0.0481	0.0000	149.9920
Total	**0.1730**	**1.8021**	**0.9414**	**1.6900e-003**	**0.8040**	**0.0910**	**0.8949**	**0.4419**	**0.0837**	**0.5256**	**0.0000**	**148.7889**	**148.7889**	**0.0481**	**0.0000**	**149.9920**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3618	0.0000	0.3618	0.1989	0.0000	0.1989	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.0898	0.9287	1.6900e-003		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	148.7888	148.7888	0.0481	0.0000	149.9918
Total	**0.0207**	**0.0898**	**0.9287**	**1.6900e-003**	**0.3618**	**2.7600e-003**	**0.3645**	**0.1989**	**2.7600e-003**	**0.2016**	**0.0000**	**148.7888**	**148.7888**	**0.0481**	**0.0000**	**149.9918**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

3.4 Grading - 2021

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					0.6604	0.0000	0.6604	0.3342	0.0000	0.3342	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7790	8.7873	5.8014	0.0121		0.3596	0.3596		0.3308	0.3308	0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347
Total	**0.7790**	**8.7873**	**5.8014**	**0.0121**	**0.6604**	**0.3596**	**1.0200**	**0.3342**	**0.3308**	**0.6650**	**0.0000**	**1,061.4523**	**1,061.4523**	**0.3433**	**0.0000**	**1,070.0347**

3.4 Grading - 2021

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	0.1263	4.3518	0.8625	0.0126	0.3424	0.0138	0.3562	0.0922	0.0132	0.1053	0.0000	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1354**	**4.3582**	**0.9302**	**0.0128**	**0.3659**	**0.0139**	**0.3798**	**0.0984**	**0.0133**	**0.1117**	**0.0000**	**1,237.1363**	**1,237.1363**	**0.0538**	**0.0000**	**1,238.4823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2972	0.0000	0.2972	0.1504	0.0000	0.1504	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.1053	5.9685	0.0121		0.0776	0.0776		0.0727	0.0727	0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334
Total	**0.2582**	**2.1053**	**5.9685**	**0.0121**	**0.2972**	**0.0776**	**0.3748**	**0.1504**	**0.0727**	**0.2231**	**0.0000**	**1,061.4511**	**1,061.4511**	**0.3433**	**0.0000**	**1,070.0334**

3.4 Grading - 2021

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	0.1263	4.3518	0.8625	0.0126	0.3424	0.0138	0.3562	0.0922	0.0132	0.1053	0.0000	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1354**	**4.3582**	**0.9302**	**0.0128**	**0.3659**	**0.0139**	**0.3798**	**0.0984**	**0.0133**	**0.1117**	**0.0000**	**1,237.1363**	**1,237.1363**	**0.0538**	**0.0000**	**1,238.4823**

3.4 Grading - 2022

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					0.2599	0.0000	0.2599	0.1140	0.0000	0.1140	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2209	2.3878	1.7454	3.9300e-003		0.0970	0.0970		0.0892	0.0892	0.0000	345.2407	345.2407	0.1117	0.0000	348.0322
Total	**0.2209**	**2.3878**	**1.7454**	**3.9300e-003**	**0.2599**	**0.0970**	**0.3569**	**0.1140**	**0.0892**	**0.2033**	**0.0000**	**345.2407**	**345.2407**	**0.1117**	**0.0000**	**348.0322**

3.4 Grading - 2022

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	0.0387	1.2964	0.2750	4.0400e-003	0.2958	3.8100e-003	0.2996	0.0753	3.6500e-003	0.0789	0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0414**	**1.2982**	**0.2952**	**4.1100e-003**	**0.3034**	**3.8600e-003**	**0.3073**	**0.0773**	**3.6900e-003**	**0.0810**	**0.0000**	**396.3892**	**396.3892**	**0.0169**	**0.0000**	**396.8127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1170	0.0000	0.1170	0.0513	0.0000	0.0513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0786	0.5995	1.9088	3.9300e-003		0.0220	0.0220		0.0207	0.0207	0.0000	345.2403	345.2403	0.1117	0.0000	348.0318
Total	**0.0786**	**0.5995**	**1.9088**	**3.9300e-003**	**0.1170**	**0.0220**	**0.1390**	**0.0513**	**0.0207**	**0.0720**	**0.0000**	**345.2403**	**345.2403**	**0.1117**	**0.0000**	**348.0318**

3.4 Grading - 2022

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	0.0387	1.2964	0.2750	4.0400e-003	0.2958	3.8100e-003	0.2996	0.0753	3.6500e-003	0.0789	0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0414**	**1.2982**	**0.2952**	**4.1100e-003**	**0.3034**	**3.8600e-003**	**0.3073**	**0.0773**	**3.6900e-003**	**0.0810**	**0.0000**	**396.3892**	**396.3892**	**0.0169**	**0.0000**	**396.8127**

3.5 Paving - 2022

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1722	125.1722	0.0405	0.0000	126.1843
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1722**	**125.1722**	**0.0405**	**0.0000**	**126.1843**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1721	125.1721	0.0405	0.0000	126.1842
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1721**	**125.1721**	**0.0405**	**0.0000**	**126.1842**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

3.6 Bay Trail Grading - 2022

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					0.4966	0.0000	0.4966	0.2721	0.0000	0.2721	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4053	4.1437	3.0396	7.4600e-003		0.1689	0.1689		0.1555	0.1555	0.0000	654.0597	654.0597	0.2108	0.0000	659.3293
Total	**0.4053**	**4.1437**	**3.0396**	**7.4600e-003**	**0.4966**	**0.1689**	**0.6655**	**0.2721**	**0.1555**	**0.4276**	**0.0000**	**654.0597**	**654.0597**	**0.2108**	**0.0000**	**659.3293**

3.6 Bay Trail Grading - 2022

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	3.9900e-003	0.1340	0.0284	4.2000e-004	0.0106	3.9000e-004	0.0110	2.8800e-003	3.8000e-004	3.2500e-003	0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0112**	**0.1389**	**0.0814**	**6.0000e-004**	**0.0306**	**5.2000e-004**	**0.0311**	**8.1900e-003**	**5.0000e-004**	**8.6800e-003**	**0.0000**	**56.6070**	**56.6070**	**2.0800e-003**	**0.0000**	**56.6590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2235	0.0000	0.2235	0.1224	0.0000	0.1224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1395	1.0055	3.6043	7.4600e-003		0.0384	0.0384		0.0361	0.0361	0.0000	654.0590	654.0590	0.2108	0.0000	659.3286
Total	**0.1395**	**1.0055**	**3.6043**	**7.4600e-003**	**0.2235**	**0.0384**	**0.2619**	**0.1224**	**0.0361**	**0.1586**	**0.0000**	**654.0590**	**654.0590**	**0.2108**	**0.0000**	**659.3286**

3.6 Bay Trail Grading - 2022

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	3.9900e-003	0.1340	0.0284	4.2000e-004	0.0106	3.9000e-004	0.0110	2.8800e-003	3.8000e-004	3.2500e-003	0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0112**	**0.1389**	**0.0814**	**6.0000e-004**	**0.0306**	**5.2000e-004**	**0.0311**	**8.1900e-003**	**5.0000e-004**	**8.6800e-003**	**0.0000**	**56.6070**	**56.6070**	**2.0800e-003**	**0.0000**	**56.6590**

3.6 Bay Trail Grading - 2023

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					0.0991	0.0000	0.0991	0.0536	0.0000	0.0536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0740	0.7283	0.5768	1.4700e-003		0.0293	0.0293		0.0270	0.0270	0.0000	128.4369	128.4369	0.0414	0.0000	129.4717
Total	**0.0740**	**0.7283**	**0.5768**	**1.4700e-003**	**0.0991**	**0.0293**	**0.1284**	**0.0536**	**0.0270**	**0.0806**	**0.0000**	**128.4369**	**128.4369**	**0.0414**	**0.0000**	**129.4717**

3.6 Bay Trail Grading - 2023

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	5.4000e-004	0.0173	5.0300e-003	8.0000e-005	8.7500e-003	3.0000e-005	8.7800e-003	2.2000e-003	3.0000e-005	2.2300e-003	0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.8700e-003**	**0.0182**	**0.0146**	**1.1000e-004**	**0.0127**	**5.0000e-005**	**0.0127**	**3.2400e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**10.6888**	**10.6888**	**3.6000e-004**	**0.0000**	**10.6977**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0446	0.0000	0.0446	0.0241	0.0000	0.0241	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.1874	0.7054	1.4700e-003		7.1300e-003	7.1300e-003		6.7200e-003	6.7200e-003	0.0000	128.4368	128.4368	0.0414	0.0000	129.4716
Total	**0.0269**	**0.1874**	**0.7054**	**1.4700e-003**	**0.0446**	**7.1300e-003**	**0.0518**	**0.0241**	**6.7200e-003**	**0.0309**	**0.0000**	**128.4368**	**128.4368**	**0.0414**	**0.0000**	**129.4716**

3.6 Bay Trail Grading - 2023

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	5.4000e-004	0.0173	5.0300e-003	8.0000e-005	8.7500e-003	3.0000e-005	8.7800e-003	2.2000e-003	3.0000e-005	2.2300e-003	0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.8700e-003**	**0.0182**	**0.0146**	**1.1000e-004**	**0.0127**	**5.0000e-005**	**0.0127**	**3.2400e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**10.6888**	**10.6888**	**3.6000e-004**	**0.0000**	**10.6977**

3.7 Building Construction - 2022

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	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.2700e-003	0.1365	0.0344	3.7000e-004	9.1900e-003	2.8000e-004	9.4800e-003	2.6600e-003	2.7000e-004	2.9300e-003	0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker	0.0173	0.0117	0.1264	4.3000e-004	0.0476	3.0000e-004	0.0479	0.0127	2.8000e-004	0.0130	0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total	**0.0216**	**0.1481**	**0.1608**	**8.0000e-004**	**0.0568**	**5.8000e-004**	**0.0574**	**0.0153**	**5.5000e-004**	**0.0159**	**0.0000**	**74.6076**	**74.6076**	**2.4100e-003**	**0.0000**	**74.6679**

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	9.8000e-004	6.7000e-003	0.0524	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**9.8000e-004**	**6.7000e-003**	**0.0524**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.2700e-003	0.1365	0.0344	3.7000e-004	9.1900e-003	2.8000e-004	9.4800e-003	2.6600e-003	2.7000e-004	2.9300e-003	0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker	0.0173	0.0117	0.1264	4.3000e-004	0.0476	3.0000e-004	0.0479	0.0127	2.8000e-004	0.0130	0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total	**0.0216**	**0.1481**	**0.1608**	**8.0000e-004**	**0.0568**	**5.8000e-004**	**0.0574**	**0.0153**	**5.5000e-004**	**0.0159**	**0.0000**	**74.6076**	**74.6076**	**2.4100e-003**	**0.0000**	**74.6679**

3.7 Building Construction - 2023

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.7 Building Construction - 2023

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	0.1396	4.5017	1.3296	0.0158	0.3985	5.3700e-003	0.4038	0.1152	5.1400e-003	0.1203	0.0000	1,508.0032	1,508.0032	0.0567	0.0000	1,509.4213
Worker	0.6980	0.4536	5.0353	0.0179	2.0642	0.0128	2.0770	0.5490	0.0118	0.5608	0.0000	1,616.4807	1,616.4807	0.0319	0.0000	1,617.2777
Total	**0.8375**	**4.9553**	**6.3649**	**0.0336**	**2.4626**	**0.0182**	**2.4808**	**0.6642**	**0.0170**	**0.6811**	**0.0000**	**3,124.4839**	**3,124.4839**	**0.0886**	**0.0000**	**3,126.6991**

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	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.7 Building Construction - 2023

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	0.1396	4.5017	1.3296	0.0158	0.3985	5.3700e-003	0.4038	0.1152	5.1400e-003	0.1203	0.0000	1,508.0032	1,508.0032	0.0567	0.0000	1,509.4213
Worker	0.6980	0.4536	5.0353	0.0179	2.0642	0.0128	2.0770	0.5490	0.0118	0.5608	0.0000	1,616.4807	1,616.4807	0.0319	0.0000	1,617.2777
Total	**0.8375**	**4.9553**	**6.3649**	**0.0336**	**2.4626**	**0.0182**	**2.4808**	**0.6642**	**0.0170**	**0.6811**	**0.0000**	**3,124.4839**	**3,124.4839**	**0.0886**	**0.0000**	**3,126.6991**

3.7 Building Construction - 2024

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.7 Building Construction - 2024

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	0.1358	4.4765	1.2848	0.0158	0.4015	5.3000e-003	0.4068	0.1161	5.0700e-003	0.1212	0.0000	1,509.6770	1,509.6770	0.0556	0.0000	1,511.0675
Worker	0.6581	0.4120	4.6922	0.0173	2.0800	0.0127	2.0927	0.5532	0.0117	0.5649	0.0000	1,563.4979	1,563.4979	0.0289	0.0000	1,564.2198
Total	**0.7938**	**4.8885**	**5.9770**	**0.0330**	**2.4816**	**0.0180**	**2.4995**	**0.6693**	**0.0167**	**0.6860**	**0.0000**	**3,073.1749**	**3,073.1749**	**0.0845**	**0.0000**	**3,075.2872**

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	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0429**	**0.2928**	**2.2873**	**3.5300e-003**		**5.3400e-003**	**5.3400e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.7 Building Construction - 2024

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	0.1358	4.4765	1.2848	0.0158	0.4015	5.3000e-003	0.4068	0.1161	5.0700e-003	0.1212	0.0000	1,509.6770	1,509.6770	0.0556	0.0000	1,511.0675
Worker	0.6581	0.4120	4.6922	0.0173	2.0800	0.0127	2.0927	0.5532	0.0117	0.5649	0.0000	1,563.4979	1,563.4979	0.0289	0.0000	1,564.2198
Total	**0.7938**	**4.8885**	**5.9770**	**0.0330**	**2.4816**	**0.0180**	**2.4995**	**0.6693**	**0.0167**	**0.6860**	**0.0000**	**3,073.1749**	**3,073.1749**	**0.0845**	**0.0000**	**3,075.2872**

3.7 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2025

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	0.1312	4.3973	1.2383	0.0156	0.4000	5.1700e-003	0.4052	0.1156	4.9400e-003	0.1206	0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker	0.6170	0.3725	4.3235	0.0165	2.0721	0.0124	2.0845	0.5511	0.0114	0.5625	0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total	**0.7482**	**4.7698**	**5.5618**	**0.0321**	**2.4721**	**0.0176**	**2.4897**	**0.6667**	**0.0164**	**0.6831**	**0.0000**	**2,987.6514**	**2,987.6514**	**0.0800**	**0.0000**	**2,989.6502**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2025

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	0.1312	4.3973	1.2383	0.0156	0.4000	5.1700e-003	0.4052	0.1156	4.9400e-003	0.1206	0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker	0.6170	0.3725	4.3235	0.0165	2.0721	0.0124	2.0845	0.5511	0.0114	0.5625	0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total	**0.7482**	**4.7698**	**5.5618**	**0.0321**	**2.4721**	**0.0176**	**2.4897**	**0.6667**	**0.0164**	**0.6831**	**0.0000**	**2,987.6514**	**2,987.6514**	**0.0800**	**0.0000**	**2,989.6502**

3.7 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2026

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	0.1277	4.3363	1.2071	0.0155	0.4000	5.0400e-003	0.4051	0.1157	4.8100e-003	0.1205	0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker	0.5835	0.3403	4.0212	0.0159	2.0721	0.0121	2.0842	0.5511	0.0111	0.5622	0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total	**0.7112**	**4.6765**	**5.2284**	**0.0314**	**2.4721**	**0.0171**	**2.4892**	**0.6667**	**0.0159**	**0.6827**	**0.0000**	**2,922.6673**	**2,922.6673**	**0.0762**	**0.0000**	**2,924.5725**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2026

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	0.1277	4.3363	1.2071	0.0155	0.4000	5.0400e-003	0.4051	0.1157	4.8100e-003	0.1205	0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker	0.5835	0.3403	4.0212	0.0159	2.0721	0.0121	2.0842	0.5511	0.0111	0.5622	0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total	**0.7112**	**4.6765**	**5.2284**	**0.0314**	**2.4721**	**0.0171**	**2.4892**	**0.6667**	**0.0159**	**0.6827**	**0.0000**	**2,922.6673**	**2,922.6673**	**0.0762**	**0.0000**	**2,924.5725**

3.7 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2027

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	0.1247	4.2743	1.1822	0.0154	0.4000	4.9100e-003	0.4050	0.1157	4.6900e-003	0.1204	0.0000	1,477.5860	1,477.5860	0.0513	0.0000	1,478.8675
Worker	0.5516	0.3119	3.7554	0.0153	2.0721	0.0115	2.0836	0.5511	0.0105	0.5616	0.0000	1,387.1900	1,387.1900	0.0216	0.0000	1,387.7291
Total	**0.6764**	**4.5862**	**4.9376**	**0.0307**	**2.4721**	**0.0164**	**2.4885**	**0.6667**	**0.0152**	**0.6820**	**0.0000**	**2,864.7760**	**2,864.7760**	**0.0728**	**0.0000**	**2,866.5965**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2027

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	0.1247	4.2743	1.1822	0.0154	0.4000	4.9100e-003	0.4050	0.1157	4.6900e-003	0.1204	0.0000	1,477.5860	1,477.5860	0.0513	0.0000	1,478.8675
Worker	0.5516	0.3119	3.7554	0.0153	2.0721	0.0115	2.0836	0.5511	0.0105	0.5616	0.0000	1,387.1900	1,387.1900	0.0216	0.0000	1,387.7291
Total	**0.6764**	**4.5862**	**4.9376**	**0.0307**	**2.4721**	**0.0164**	**2.4885**	**0.6667**	**0.0152**	**0.6820**	**0.0000**	**2,864.7760**	**2,864.7760**	**0.0728**	**0.0000**	**2,866.5965**

3.7 Building Construction - 2028

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	0.1634	1.4901	1.9221	3.2200e-003		0.0630	0.0630		0.0593	0.0593	0.0000	277.1438	277.1438	0.0652	0.0000	278.7724
Total	**0.1634**	**1.4901**	**1.9221**	**3.2200e-003**		**0.0630**	**0.0630**		**0.0593**	**0.0593**	**0.0000**	**277.1438**	**277.1438**	**0.0652**	**0.0000**	**278.7724**

3.7 Building Construction - 2028

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	0.1120	3.8666	1.0666	0.0141	0.3663	4.4000e-003	0.3707	0.1059	4.2000e-003	0.1101	0.0000	1,346.8381	1,346.8381	0.0459	0.0000	1,347.9848
Worker	0.4756	0.2627	3.2260	0.0136	1.8974	9.7300e-003	1.9072	0.5046	8.9500e-003	0.5136	0.0000	1,230.3164	1,230.3164	0.0181	0.0000	1,230.7689
Total	**0.5876**	**4.1293**	**4.2926**	**0.0276**	**2.2638**	**0.0141**	**2.2779**	**0.6105**	**0.0132**	**0.6237**	**0.0000**	**2,577.1544**	**2,577.1544**	**0.0640**	**0.0000**	**2,578.7537**

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	0.0392	0.2671	2.0865	3.2200e-003		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	277.1434	277.1434	0.0652	0.0000	278.7721
Total	**0.0392**	**0.2671**	**2.0865**	**3.2200e-003**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**277.1434**	**277.1434**	**0.0652**	**0.0000**	**278.7721**

3.7 Building Construction - 2028

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	0.1120	3.8666	1.0666	0.0141	0.3663	4.4000e-003	0.3707	0.1059	4.2000e-003	0.1101	0.0000	1,346.8381	1,346.8381	0.0459	0.0000	1,347.9848
Worker	0.4756	0.2627	3.2260	0.0136	1.8974	9.7300e-003	1.9072	0.5046	8.9500e-003	0.5136	0.0000	1,230.3164	1,230.3164	0.0181	0.0000	1,230.7689
Total	**0.5876**	**4.1293**	**4.2926**	**0.0276**	**2.2638**	**0.0141**	**2.2779**	**0.6105**	**0.0132**	**0.6237**	**0.0000**	**2,577.1544**	**2,577.1544**	**0.0640**	**0.0000**	**2,578.7537**

3.8 Architectural Coating - 2023

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	12.6236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0659	0.4482	0.6230	1.0200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	87.8319	87.8319	5.2500e-003	0.0000	87.9633
Total	**12.6895**	**0.4482**	**0.6230**	**1.0200e-003**		**0.0244**	**0.0244**		**0.0244**	**0.0244**	**0.0000**	**87.8319**	**87.8319**	**5.2500e-003**	**0.0000**	**87.9633**

3.8 Architectural Coating - 2023

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	0.0461	0.0300	0.3328	1.1800e-003	0.1364	8.5000e-004	0.1373	0.0363	7.8000e-004	0.0371	0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total	**0.0461**	**0.0300**	**0.3328**	**1.1800e-003**	**0.1364**	**8.5000e-004**	**0.1373**	**0.0363**	**7.8000e-004**	**0.0371**	**0.0000**	**106.8296**	**106.8296**	**2.1100e-003**	**0.0000**	**106.8823**

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	12.6236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0443	0.6304	1.0200e-003		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632
Total	**12.6338**	**0.0443**	**0.6304**	**1.0200e-003**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**87.8318**	**87.8318**	**5.2500e-003**	**0.0000**	**87.9632**

3.8 Architectural Coating - 2023

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	0.0461	0.0300	0.3328	1.1800e-003	0.1364	8.5000e-004	0.1373	0.0363	7.8000e-004	0.0371	0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total	**0.0461**	**0.0300**	**0.3328**	**1.1800e-003**	**0.1364**	**8.5000e-004**	**0.1373**	**0.0363**	**7.8000e-004**	**0.0371**	**0.0000**	**106.8296**	**106.8296**	**2.1100e-003**	**0.0000**	**106.8823**

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1170	0.1738	2.9000e-004		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.5402**	**0.1170**	**0.1738**	**2.9000e-004**		**5.8500e-003**	**5.8500e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

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	0.0120	7.5400e-003	0.0859	3.2000e-004	0.0381	2.3000e-004	0.0383	0.0101	2.1000e-004	0.0103	0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total	**0.0120**	**7.5400e-003**	**0.0859**	**3.2000e-004**	**0.0381**	**2.3000e-004**	**0.0383**	**0.0101**	**2.1000e-004**	**0.0103**	**0.0000**	**28.6156**	**28.6156**	**5.3000e-004**	**0.0000**	**28.6288**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1759	2.9000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.5257**	**0.0124**	**0.1759**	**2.9000e-004**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

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	0.0120	7.5400e-003	0.0859	3.2000e-004	0.0381	2.3000e-004	0.0383	0.0101	2.1000e-004	0.0103	0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total	**0.0120**	**7.5400e-003**	**0.0859**	**3.2000e-004**	**0.0381**	**2.3000e-004**	**0.0383**	**0.0101**	**2.1000e-004**	**0.0103**	**0.0000**	**28.6156**	**28.6156**	**5.3000e-004**	**0.0000**	**28.6288**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Unmitigated	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,544.40	1,678.82	1421.42	3,570,732	3,570,732
Apartments Low Rise	1,890.00	2,054.50	1739.50	4,369,777	4,369,777
Apartments Mid Rise	1,375.50	1,319.50	1211.00	3,104,112	3,104,112
Apartments Mid Rise	1,858.89	1,783.21	1636.58	4,194,986	4,194,986
Apartments Mid Rise	1,206.51	1,157.39	1062.22	2,722,750	2,722,750
City Park	56.70	682.50	502.20	447,770	447,770
City Park	5.16	62.11	45.70	40,747	40,747
Convenience Market (24 Hour)	0.00	0.00	0.00		
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Single Family Housing	1,893.34	1,970.06	1715.24	4,339,422	4,339,422
Unenclosed Parking Structure	202.00	202.00	202.00	153,839	153,839
Total	10,954.90	11,933.49	10,178.46	24,260,593	24,260,593

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Unenclosed Parking Structure	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Apartments Mid Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
City Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Convenience Market (24 Hour)	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Quality Restaurant	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Regional Shopping Center	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Single Family Housing	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Unenclosed Parking Structure	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	587.2870	587.2870	0.0780	9.4500e-003	592.0525
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	604.1000	604.1000	0.0802	9.7200e-003	609.0019
NaturalGas Mitigated	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	1,947.9243	1,947.9243	0.0373	0.0357	1,959.4998
NaturalGas Unmitigated	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	1,947.9243	1,947.9243	0.0373	0.0357	1,959.4998

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.58171e+006	0.0301	0.2572	0.1095	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.8612	297.8612	5.7100e-003	5.4600e-003	299.6312
Apartments Low Rise	6.83076e+006	0.0368	0.3148	0.1339	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	364.5154	364.5154	6.9900e-003	6.6800e-003	366.6816
Apartments Mid Rise	2.71427e+006	0.0146	0.1251	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.8436	144.8436	2.7800e-003	2.6600e-003	145.7044
Apartments Mid Rise	3.09444e+006	0.0167	0.1426	0.0607	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.1312	165.1312	3.1700e-003	3.0300e-003	166.1125
Apartments Mid Rise	4.18192e+006	0.0226	0.1927	0.0820	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	223.1630	223.1630	4.2800e-003	4.0900e-003	224.4891
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1968**	**1.6924**	**0.7918**	**0.0107**		**0.1360**	**0.1360**		**0.1360**	**0.1360**	**0.0000**	**1,947.9243**	**1,947.9243**	**0.0374**	**0.0357**	**1,959.4998**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.58171e+006	0.0301	0.2572	0.1095	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.8612	297.8612	5.7100e-003	5.4600e-003	299.6312
Apartments Low Rise	6.83076e+006	0.0368	0.3148	0.1339	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	364.5154	364.5154	6.9900e-003	6.6800e-003	366.6816
Apartments Mid Rise	2.71427e+006	0.0146	0.1251	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.8436	144.8436	2.7800e-003	2.6600e-003	145.7044
Apartments Mid Rise	3.09444e+006	0.0167	0.1426	0.0607	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.1312	165.1312	3.1700e-003	3.0300e-003	166.1125
Apartments Mid Rise	4.18192e+006	0.0226	0.1927	0.0820	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	223.1630	223.1630	4.2800e-003	4.0900e-003	224.4891
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1968**	**1.6924**	**0.7918**	**0.0107**		**0.1360**	**0.1360**		**0.1360**	**0.1360**	**0.0000**	**1,947.9243**	**1,947.9243**	**0.0374**	**0.0357**	**1,959.4998**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.20719e+006	136.1098	0.0181	2.1900e-003	137.2143
Apartments Mid Rise	1.37627e+006	155.1741	0.0206	2.5000e-003	156.4332
Apartments Mid Rise	1.85994e+006	209.7067	0.0278	3.3700e-003	211.4083
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Quality Restaurant	294800	66.4771	8.8300e-003	1.0700e-003	67.0165
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**604.1000**	**0.0802**	**9.7200e-003**	**609.0019**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.1746e+006	132.4353	0.0176	2.1300e-003	133.5099
Apartments Mid Rise	1.33912e+006	150.9849	0.0200	2.4300e-003	152.2100
Apartments Mid Rise	1.80972e+006	204.0452	0.0271	3.2800e-003	205.7009
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Quality Restaurant	280220	63.1893	8.3900e-003	1.0200e-003	63.7021
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**587.2870**	**0.0780**	**9.4500e-003**	**592.0525**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6934	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Unmitigated	8.1638	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6146					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**8.1638**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**6.6934**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	124.6836	3.6831	0.0881	243.0217
Unmitigated	164.2714	4.6050	0.1103	312.2623

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	41.438 / 26.1239	48.7362	1.3550	0.0325	92.2824
Apartments Mid Rise	73.624 / 46.4152	86.5911	2.4074	0.0577	163.9609
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.370363 / 0.226996	0.4330	0.0121	2.9000e-004	0.8222
Quality Restaurant	6.07067 / 0.38749	5.7825	0.1983	4.7300e-003	12.1510
Regional Shopping Center	1.48145 / 0.907986	1.7321	0.0484	1.1600e-003	3.2889
Single Family Housing	17.8522 / 11.2546	20.9964	0.5838	0.0140	39.7569
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**164.2714**	**4.6050**	**0.1103**	**312.2623**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	33.1504 / 15.6744	36.9272	1.0837	0.0259	71.7474
Apartments Mid Rise	58.8992 / 27.8491	65.6096	1.9255	0.0461	127.4757
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.29629 / 0.136198	0.3285	9.6900e-003	2.3000e-004	0.6397
Quality Restaurant	4.85654 / 0.232494	4.5954	0.1587	3.7900e-003	9.6900
Regional Shopping Center	1.18516 / 0.544791	1.3140	0.0387	9.3000e-004	2.5588
Single Family Housing	14.2818 / 6.75279	15.9089	0.4669	0.0112	30.9100
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**124.6836**	**3.6831**	**0.0881**	**243.0216**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	121.6657	7.1902	0.0000	301.4216
Unmitigated	243.3314	14.3805	0.0000	602.8431

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	292.56	59.3870	3.5097	0.0000	147.1289
Apartments Mid Rise	519.8	105.5147	6.2357	0.0000	261.4082
City Park	2.81	0.5704	0.0337	0.0000	1.4132
Convenience Market (24 Hour)	15.03	3.0510	0.1803	0.0000	7.5586
Quality Restaurant	18.25	3.7046	0.2189	0.0000	9.1780
Regional Shopping Center	21	4.2628	0.2519	0.0000	10.5609
Single Family Housing	329.28	66.8409	3.9502	0.0000	165.5954
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**243.3314**	**14.3805**	**0.0000**	**602.8431**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	146.28	29.6935	1.7548	0.0000	73.5644
Apartments Mid Rise	259.9	52.7574	3.1179	0.0000	130.7041
City Park	1.405	0.2852	0.0169	0.0000	0.7066
Convenience Market (24 Hour)	7.515	1.5255	0.0902	0.0000	3.7793
Quality Restaurant	9.125	1.8523	0.1095	0.0000	4.5890
Regional Shopping Center	10.5	2.1314	0.1260	0.0000	5.2805
Single Family Housing	164.64	33.4204	1.9751	0.0000	82.7977
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**121.6657**	**7.1902**	**0.0000**	**301.4216**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	2	50	2682	0.73	Diesel
Emergency Generator	1	2	50	2682	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Total	**0.0324**	**0.1079**	**0.5611**	**1.0600e-003**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**102.1298**	**102.1298**	**0.0143**	**0.0000**	**102.4878**

11.0 Vegetation

Point Molate - Residential Heavy - Full Build Out with Mitigation

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking Structure	100.00	Space	0.00	40,000.00	0
City Park	30.00	Acre	30.00	1,306,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Apartments Low Rise	286.00	Dwelling Unit	8.97	286,000.00	818
Apartments Low Rise	350.00	Dwelling Unit	10.98	350,000.00	1001
Apartments Mid Rise	350.00	Dwelling Unit	4.62	350,000.00	1001
Apartments Mid Rise	473.00	Dwelling Unit	6.24	473,000.00	1353
Apartments Mid Rise	307.00	Dwelling Unit	4.05	307,000.00	878
Single Family Housing	274.00	Dwelling Unit	44.65	493,200.00	784
Convenience Market (24 Hour)	5.00	1000sqft	0.00	5,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				

CO2 Intensity (lb/MWhr)	248.57	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project operational year = 2024. Updated electricity emission factors to incorporate RPS for 2024.

Land Use - CalEEMod acerage scaled to match project acerage of 80 acres for Residential , retail and restaurant.

Construction Phase - Construction duration is from 2/1/2021 to 11/30/2028 based on Suncal schedule. Total construction days match inputs provided by AES. Exact start and end dates are defined by CalEEMod and won't exactly match AES/SunCal inputs

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment - Construction equipment updated to match inputs provided by developer/AES.

Off-road Equipment -

Off-road Equipment - Construction equipment updated to match inputs provided by developer/AES.

Off-road Equipment -

Trips and VMT - CalEEMod default trip rates

Demolition - Input provided by AES/developer.

Grading - Total soil quantity exported is 355,000 cu yd. Grading area for bay trail development is 2.73 acres. Grading area for project is 90 acres.

Road Dust - 0.047 g/m2 sL

Woodstoves - 600 Natural Gas fireplaces to be installed with the project.

Consumer Products - VOC emission factors updated to be county-specific VOC factors.

Landscape Equipment - Total landscaping days set to zero

Energy Use - 2019 Title-24 energy reductions applied to energy intensity factors for non-historical buildings. Rooftop PV is required to match total energy usage for Low-rise and Single Family units.

Area Mitigation - Assuming "super-compliant" VOC paint for indoor and outdoor coatings - EFs from SCAQMD Rule 1113.

Energy Mitigation - Applying energy efficient appliances to residential units and restaurant.

Water Mitigation - Applying low-flow faucets, toilets and showers for indoor water use, with default reduction percentages.

Waste Mitigation - Applying 50% solid waste reduction measure.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	10

Point Molate - Residential Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	10
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Point Molate - Residential Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	78.00
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	NumDays	310.00	262.00
tblConstructionPhase	NumDays	220.00	125.00
tblConstructionPhase	NumDays	120.00	89.00
tblConsumerProducts	ROG_EF	2.14E-05	1.55E-05
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	LightingElect	741.44	698.33
tblEnergyUse	LightingElect	4.88	5.88
tblEnergyUse	LightingElect	5.34	5.61
tblEnergyUse	LightingElect	4.88	5.12
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	1.75	1.14
tblEnergyUse	NT24E	3,172.76	0.00
tblEnergyUse	NT24E	3,054.10	2,848.06
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	2,615.00	2,216.09
tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	NT24NG	128.02	128.00

tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	T24E	233.06	0.00
tblEnergyUse	T24E	426.45	385.82
tblEnergyUse	T24E	2.24	2.90
tblEnergyUse	T24E	2.67	2.90
tblEnergyUse	T24E	2.24	2.45
tblEnergyUse	T24E	217.68	0.00
tblEnergyUse	T24NG	17,734.50	16,901.46
tblEnergyUse	T24NG	6,115.43	6,625.17
tblEnergyUse	T24NG	3.90	5.00
tblEnergyUse	T24NG	39.90	41.30
tblEnergyUse	T24NG	3.90	4.48
tblEnergyUse	T24NG	39,708.76	35,976.35
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	95.40	600.00
tblFireplaces	NumberGas	169.50	0.00
tblFireplaces	NumberGas	68.50	0.00
tblFireplaces	NumberNoFireplace	25.44	0.00
tblFireplaces	NumberNoFireplace	45.20	0.00
tblFireplaces	NumberNoFireplace	21.92	0.00
tblFireplaces	NumberWood	108.12	0.00

tblFireplaces	NumberWood	192.10	0.00
tblFireplaces	NumberWood	117.82	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.18	0.18

tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003

tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01

tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblGrading	AcresOfGrading	1,696.50	90.00
tblGrading	AcresOfGrading	622.25	2.73

tblGrading	MaterialExported	0.00	344,550.00
tblGrading	MaterialExported	0.00	10,450.00
tblLandUse	LotAcreage	0.90	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	17.88	8.97
tblLandUse	LotAcreage	21.88	10.98
tblLandUse	LotAcreage	8.08	4.05
tblLandUse	LotAcreage	9.21	4.62
tblLandUse	LotAcreage	12.45	6.24
tblLandUse	LotAcreage	88.96	44.65
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblOffRoadEquipment	HorsePower	402.00	367.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	641.35	248.57
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004

tblRoadDust	RoadSiltLoading	0.1	0.047
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblVehicleEF	HHD	0.41	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.58	6.28
tblVehicleEF	HHD	0.84	0.40
tblVehicleEF	HHD	2.87	5.3000e-003
tblVehicleEF	HHD	4,335.05	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.83	5.34
tblVehicleEF	HHD	1.90	2.66
tblVehicleEF	HHD	19.75	2.36
tblVehicleEF	HHD	7.9210e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02

tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	7.5790e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.41	0.42
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3500e-004	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.39	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.15	6.28

tblVehicleEF	HHD	0.85	0.40
tblVehicleEF	HHD	2.61	5.3000e-003
tblVehicleEF	HHD	4,592.60	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	14.28	5.34
tblVehicleEF	HHD	1.83	2.66
tblVehicleEF	HHD	19.74	2.36
tblVehicleEF	HHD	6.6780e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	6.3890e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.39	0.42
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	1.3100e-004	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.45	0.49
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.45	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.17	6.28
tblVehicleEF	HHD	0.83	0.40
tblVehicleEF	HHD	3.11	5.3000e-003
tblVehicleEF	HHD	3,979.39	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.22	5.34
tblVehicleEF	HHD	1.93	2.66
tblVehicleEF	HHD	19.77	2.36
tblVehicleEF	HHD	9.6380e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	9.2210e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3900e-004	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.51	0.49
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	LDA	3.2820e-003	1.8000e-003
tblVehicleEF	LDA	4.5120e-003	0.05
tblVehicleEF	LDA	0.48	0.52
tblVehicleEF	LDA	1.04	2.15
tblVehicleEF	LDA	229.87	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03

tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.2620e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3010e-003	2.4000e-003
tblVehicleEF	LDA	5.4600e-004	5.0000e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	3.7280e-003	1.8000e-003
tblVehicleEF	LDA	3.6390e-003	0.05
tblVehicleEF	LDA	0.58	0.52
tblVehicleEF	LDA	0.80	2.15
tblVehicleEF	LDA	251.31	239.59
tblVehicleEF	LDA	52.85	50.81

tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	9.3650e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.21
tblVehicleEF	LDA	2.5170e-003	2.4000e-003
tblVehicleEF	LDA	5.4200e-004	5.0000e-004
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.23
tblVehicleEF	LDA	3.1830e-003	1.8000e-003
tblVehicleEF	LDA	5.1540e-003	0.05
tblVehicleEF	LDA	0.47	0.52
tblVehicleEF	LDA	1.24	2.15
tblVehicleEF	LDA	226.93	239.59

tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	8.0170e-003	6.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.2720e-003	2.4000e-003
tblVehicleEF	LDA	5.4900e-004	5.0000e-004
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDT1	6.8390e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.88	0.87
tblVehicleEF	LDT1	2.31	2.34

tblVehicleEF	LDT1	287.67	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.13	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.15	0.32
tblVehicleEF	LDT1	2.8860e-003	2.8000e-003
tblVehicleEF	LDT1	7.0800e-004	6.0000e-004
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.16	0.35
tblVehicleEF	LDT1	7.6930e-003	3.8000e-003
tblVehicleEF	LDT1	8.8990e-003	0.07
tblVehicleEF	LDT1	1.05	0.87

tblVehicleEF	LDT1	1.76	2.34
tblVehicleEF	LDT1	313.61	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.11	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	3.1480e-003	2.8000e-003
tblVehicleEF	LDT1	6.9900e-004	6.0000e-004
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.13	0.35
tblVehicleEF	LDT1	6.6770e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07

tblVehicleEF	LDT1	0.87	0.87
tblVehicleEF	LDT1	2.76	2.34
tblVehicleEF	LDT1	284.11	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.10	0.07
tblVehicleEF	LDT1	0.14	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	2.8500e-003	2.8000e-003
tblVehicleEF	LDT1	7.1600e-004	6.0000e-004
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.19	0.35
tblVehicleEF	LDT2	4.4150e-003	2.9000e-003

tblVehicleEF	LDT2	5.8360e-003	0.06
tblVehicleEF	LDT2	0.62	0.70
tblVehicleEF	LDT2	1.34	2.74
tblVehicleEF	LDT2	323.78	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	3.2420e-003	3.0000e-003
tblVehicleEF	LDT2	7.6900e-004	7.0000e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.09	0.32

tblVehicleEF	LDT2	5.0080e-003	2.9000e-003
tblVehicleEF	LDT2	4.7080e-003	0.06
tblVehicleEF	LDT2	0.75	0.70
tblVehicleEF	LDT2	1.03	2.74
tblVehicleEF	LDT2	353.38	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.08	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	3.5390e-003	3.0000e-003
tblVehicleEF	LDT2	7.6400e-004	7.0000e-004
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05

tblVehicleEF	LDT2	0.07	0.32
tblVehicleEF	LDT2	4.2820e-003	2.9000e-003
tblVehicleEF	LDT2	6.6640e-003	0.06
tblVehicleEF	LDT2	0.60	0.70
tblVehicleEF	LDT2	1.58	2.74
tblVehicleEF	LDT2	319.73	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.2010e-003	3.0000e-003
tblVehicleEF	LDT2	7.7400e-004	7.0000e-004
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.99	0.77
tblVehicleEF	LHD1	2.29	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.39	0.94
tblVehicleEF	LHD1	0.94	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4200e-004	1.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	1.01	0.77
tblVehicleEF	LHD1	2.10	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.33	0.94
tblVehicleEF	LHD1	0.87	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004

tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.3800e-004	1.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.16	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.24	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003

tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.98	0.77
tblVehicleEF	LHD1	2.47	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.42	0.94
tblVehicleEF	LHD1	1.00	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.35	0.20

tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4500e-004	1.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.0300e-003	6.9000e-003
tblVehicleEF	LHD2	5.6740e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	1.02	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.77	0.98
tblVehicleEF	LHD2	0.40	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4300e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.1180e-003	6.9000e-003
tblVehicleEF	LHD2	5.3450e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	0.94	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.74	0.98
tblVehicleEF	LHD2	0.38	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003

tblVehicleEF	LHD2	2.4200e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	6.9590e-003	6.9000e-003
tblVehicleEF	LHD2	5.9550e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.55	0.64
tblVehicleEF	LHD2	1.09	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.78	0.98
tblVehicleEF	LHD2	0.42	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	MCY	0.46	0.34
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.70	20.00
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.16	1.16

tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.27	2.29
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	2.1230e-003	2.1000e-003
tblVehicleEF	MCY	6.8900e-004	6.0000e-004
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.81	2.82
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.43	2.15
tblVehicleEF	MCY	0.44	0.34
tblVehicleEF	MCY	0.13	0.26
tblVehicleEF	MCY	18.98	20.00
tblVehicleEF	MCY	8.86	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71

tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.29	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.18	2.29
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.83	1.98
tblVehicleEF	MCY	2.1090e-003	2.1000e-003
tblVehicleEF	MCY	6.5400e-004	6.0000e-004
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.70	2.82
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.99	2.15
tblVehicleEF	MCY	0.47	0.34
tblVehicleEF	MCY	0.19	0.26
tblVehicleEF	MCY	21.47	20.00
tblVehicleEF	MCY	11.78	9.07
tblVehicleEF	MCY	173.46	213.40

tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.25	1.16
tblVehicleEF	MCY	0.35	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.37	2.29
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.62	1.98
tblVehicleEF	MCY	2.1550e-003	2.1000e-003
tblVehicleEF	MCY	7.2600e-004	6.0000e-004
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.94	2.82
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.85	2.15
tblVehicleEF	MDV	8.6020e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.97	0.82
tblVehicleEF	MDV	2.71	3.10

tblVehicleEF	MDV	443.89	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4430e-003	3.8000e-003
tblVehicleEF	MDV	1.0620e-003	8.0000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MDV	9.7400e-003	3.8000e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.18	0.82

tblVehicleEF	MDV	2.08	3.10
tblVehicleEF	MDV	483.31	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.21	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.16	0.38
tblVehicleEF	MDV	4.8400e-003	3.8000e-003
tblVehicleEF	MDV	1.0500e-003	8.0000e-004
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.18	0.42
tblVehicleEF	MDV	8.3570e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	0.96	0.82
tblVehicleEF	MDV	3.22	3.10
tblVehicleEF	MDV	438.49	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.26	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.23	0.38
tblVehicleEF	MDV	4.3890e-003	3.8000e-003
tblVehicleEF	MDV	1.0710e-003	8.0000e-004
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.25	0.42
tblVehicleEF	MH	0.02	9.3000e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.46	0.85
tblVehicleEF	MH	4.96	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.34	1.52
tblVehicleEF	MH	0.78	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6600e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.10	0.08

tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.52	0.85
tblVehicleEF	MH	4.45	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.26	1.52
tblVehicleEF	MH	0.72	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.27	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58

tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.41	0.85
tblVehicleEF	MH	5.39	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.38	1.52
tblVehicleEF	MH	0.83	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.31	0.09

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7400e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.4400e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.37	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.47	1.19
tblVehicleEF	MHD	134.03	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.38	0.52
tblVehicleEF	MHD	1.11	1.47
tblVehicleEF	MHD	10.23	1.66
tblVehicleEF	MHD	1.4100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.3500e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003

tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	MHD	1.2910e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0200e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	0.01	4.0000e-003
tblVehicleEF	MHD	4.5430e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.43
tblVehicleEF	MHD	0.36	0.27
tblVehicleEF	MHD	4.98	1.19
tblVehicleEF	MHD	142.13	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07

tblVehicleEF	MHD	0.40	0.52
tblVehicleEF	MHD	1.07	1.47
tblVehicleEF	MHD	10.17	1.66
tblVehicleEF	MHD	1.1900e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.1400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.31	0.05
tblVehicleEF	MHD	1.3670e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9400e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02

tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.3600e-003	2.1000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.94	1.19
tblVehicleEF	MHD	123.22	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.37	0.52
tblVehicleEF	MHD	1.13	1.47
tblVehicleEF	MHD	10.28	1.66
tblVehicleEF	MHD	1.7100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.6400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.35	0.05

tblVehicleEF	MHD	1.1890e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1000e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.38	0.06
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.3020e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.53	0.98
tblVehicleEF	OBUS	5.50	2.88
tblVehicleEF	OBUS	71.68	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.14	0.23
tblVehicleEF	OBUS	0.75	1.13
tblVehicleEF	OBUS	2.17	0.68
tblVehicleEF	OBUS	1.3000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.2000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06

tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.34	0.14
tblVehicleEF	OBUS	6.9600e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8700e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.37	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.5680e-003	9.0000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.55	0.98
tblVehicleEF	OBUS	4.94	2.88
tblVehicleEF	OBUS	74.94	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24

tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.15	0.23
tblVehicleEF	OBUS	0.71	1.13
tblVehicleEF	OBUS	2.10	0.68
tblVehicleEF	OBUS	1.1000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.0000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.32	0.14
tblVehicleEF	OBUS	7.2700e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7700e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.35	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.0920e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.50
tblVehicleEF	OBUS	0.52	0.98
tblVehicleEF	OBUS	5.95	2.88
tblVehicleEF	OBUS	67.19	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.13	0.23
tblVehicleEF	OBUS	0.77	1.13
tblVehicleEF	OBUS	2.23	0.68
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	6.5300e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9500e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.39	0.15
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1030e-003	2.6000e-003
tblVehicleEF	SBUS	0.06	1.3000e-003
tblVehicleEF	SBUS	2.09	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.33	0.19
tblVehicleEF	SBUS	1,440.18	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.22	2.23
tblVehicleEF	SBUS	4.78	2.75
tblVehicleEF	SBUS	19.18	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02

tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2700e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	8.0000e-003
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1440e-003	2.6000e-003
tblVehicleEF	SBUS	0.05	1.3000e-003
tblVehicleEF	SBUS	1.93	1.26
tblVehicleEF	SBUS	0.40	0.22

tblVehicleEF	SBUS	0.91	0.19
tblVehicleEF	SBUS	1,522.68	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.64	2.23
tblVehicleEF	SBUS	4.59	2.75
tblVehicleEF	SBUS	19.17	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	9.5970e-003	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.24	0.09
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.05	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2100e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004

tblVehicleEF	SBUS	0.33	0.12
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.06	8.0000e-003
tblVehicleEF	SBUS	0.88	0.02
tblVehicleEF	SBUS	6.0730e-003	2.6000e-003
tblVehicleEF	SBUS	0.07	1.3000e-003
tblVehicleEF	SBUS	2.33	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.66	0.19
tblVehicleEF	SBUS	1,326.25	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	12.63	2.23
tblVehicleEF	SBUS	4.86	2.75
tblVehicleEF	SBUS	19.19	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004

tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.3300e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	8.0000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.07	1.5000e-003
tblVehicleEF	UBUS	4.04	8.13
tblVehicleEF	UBUS	11.74	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.66	0.64
tblVehicleEF	UBUS	12.20	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00

tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.98	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7290e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.65	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	1.08	5.8000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.06	1.5000e-003
tblVehicleEF	UBUS	4.11	8.13
tblVehicleEF	UBUS	9.17	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.41	0.64
tblVehicleEF	UBUS	12.07	0.03
tblVehicleEF	UBUS	0.49	0.08

tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.39	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.85	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.6840e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.66	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.93	5.8000e-003
tblVehicleEF	UBUS	0.23	1.10
tblVehicleEF	UBUS	0.08	1.5000e-003
tblVehicleEF	UBUS	4.00	8.13
tblVehicleEF	UBUS	14.08	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75

tblVehicleEF	UBUS	5.77	0.64
tblVehicleEF	UBUS	12.31	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.10	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7700e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.64	1.12
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.20	5.8000e-003
tblVehicleTrips	CC_TTP	0.00	80.10
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.90

tblVehicleTrips	DV_TP	0.00	15.00
tblVehicleTrips	PB_TP	0.00	61.00
tblVehicleTrips	PR_TP	0.00	24.00
tblVehicleTrips	ST_TR	7.16	5.87
tblVehicleTrips	ST_TR	6.39	3.77
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	94.36	24.19
tblVehicleTrips	ST_TR	49.97	26.98
tblVehicleTrips	ST_TR	9.91	7.19
tblVehicleTrips	ST_TR	0.00	2.02
tblVehicleTrips	SU_TR	6.07	4.97
tblVehicleTrips	SU_TR	5.86	3.46
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	72.16	18.50
tblVehicleTrips	SU_TR	25.24	13.63
tblVehicleTrips	SU_TR	8.62	6.26
tblVehicleTrips	SU_TR	0.00	2.02
tblVehicleTrips	WD_TR	6.59	5.40
tblVehicleTrips	WD_TR	6.65	3.93
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	89.95	23.06
tblVehicleTrips	WD_TR	42.70	23.06
tblVehicleTrips	WD_TR	9.52	6.91
tblVehicleTrips	WD_TR	0.00	2.02
tblWater	OutdoorWaterUseRate	38,997,184.57	0.00
tblWoodstoves	NumberCatalytic	12.72	0.00
tblWoodstoves	NumberCatalytic	22.60	0.00

tblWoodstoves	NumberCatalytic	10.96	0.00
tblWoodstoves	NumberNoncatalytic	12.72	0.00
tblWoodstoves	NumberNoncatalytic	22.60	0.00
tblWoodstoves	NumberNoncatalytic	10.96	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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					
2021	1.2161	16.2072	8.5517	0.0283	1.8677	0.5252	2.3929	0.8817	0.4842	1.3658	0.0000	2,597.7828	2,597.7828	0.4832	0.0000	2,609.8618
2022	0.7771	8.8607	6.3025	0.0185	1.1548	0.3089	1.4637	0.4889	0.2845	0.7734	0.0000	1,665.0865	1,665.0865	0.3862	0.0000	1,674.7403
2023	13.8535	8.0501	10.0238	0.0409	2.7108	0.1637	2.8746	0.7573	0.1547	0.9120	0.0000	3,759.6173	3,759.6173	0.2094	0.0000	3,764.8524
2024	4.5389	6.7742	8.3545	0.0372	2.5196	0.1044	2.6240	0.6794	0.0984	0.7778	0.0000	3,430.0241	3,430.0241	0.1582	0.0000	3,433.9797
2025	0.9266	6.3971	7.6609	0.0356	2.4721	0.0864	2.5586	0.6667	0.0811	0.7479	0.0000	3,290.3063	3,290.3063	0.1511	0.0000	3,294.0837
2026	0.8897	6.3038	7.3274	0.0349	2.4721	0.0860	2.5581	0.6667	0.0807	0.7474	0.0000	3,225.3222	3,225.3222	0.1474	0.0000	3,229.0060
2027	0.8548	6.2134	7.0366	0.0343	2.4721	0.0852	2.5573	0.6667	0.0800	0.7467	0.0000	3,167.4309	3,167.4309	0.1440	0.0000	3,171.0301
2028	0.7510	5.6194	6.2147	0.0309	2.2638	0.0772	2.3409	0.6105	0.0725	0.6830	0.0000	2,854.2982	2,854.2982	0.1291	0.0000	2,857.5262
Maximum	**13.8535**	**16.2072**	**10.0238**	**0.0409**	**2.7108**	**0.5252**	**2.8746**	**0.8817**	**0.4842**	**1.3658**	**0.0000**	**3,759.6173**	**3,759.6173**	**0.4832**	**0.0000**	**3,764.8524**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4376	6.6648	8.7730	0.0283	1.0488	0.0969	1.1457	0.4528	0.0913	0.5441	0.0000	2,597.7812	2,597.7812	0.4832	0.0000	2,609.8602
2022	0.3649	3.8941	7.0339	0.0185	0.7387	0.1010	0.8398	0.2765	0.0944	0.3709	0.0000	1,665.0852	1,665.0852	0.3862	0.0000	1,674.7389
2023	13.5888	5.5257	10.3178	0.0409	2.6563	0.0329	2.6892	0.7278	0.0312	0.7590	0.0000	3,759.6167	3,759.6167	0.2094	0.0000	3,764.8517
2024	4.3745	5.2011	8.5261	0.0372	2.5196	0.0239	2.5436	0.6794	0.0227	0.7021	0.0000	3,430.0237	3,430.0237	0.1582	0.0000	3,433.9793
2025	0.7910	5.0614	7.8404	0.0356	2.4721	0.0229	2.4950	0.6667	0.0217	0.6884	0.0000	3,290.3060	3,290.3060	0.1511	0.0000	3,294.0834
2026	0.7540	4.9682	7.5069	0.0349	2.4721	0.0224	2.4946	0.6667	0.0212	0.6880	0.0000	3,225.3219	3,225.3219	0.1474	0.0000	3,229.0056
2027	0.7192	4.8778	7.2161	0.0343	2.4721	0.0217	2.4938	0.6667	0.0206	0.6873	0.0000	3,167.4305	3,167.4305	0.1440	0.0000	3,171.0297
2028	0.6268	4.3963	6.3791	0.0309	2.2638	0.0190	2.2828	0.6105	0.0180	0.6286	0.0000	2,854.2979	2,854.2979	0.1291	0.0000	2,857.5258
Maximum	**13.5888**	**6.6648**	**10.3178**	**0.0409**	**2.6563**	**0.1010**	**2.6892**	**0.7278**	**0.0944**	**0.7590**	**0.0000**	**3,759.6167**	**3,759.6167**	**0.4832**	**0.0000**	**3,764.8517**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.03**	**37.00**	**-3.45**	**0.00**	**7.19**	**76.28**	**12.32**	**12.38**	**75.97**	**24.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	3.6175	0.8996
2	**5-1-2021**	**7-31-2021**	5.8880	2.3394

3	**8-1-2021**	**10-31-2021**	4.6736	2.2709
4	**11-1-2021**	**1-31-2022**	5.0925	2.4874
5	**2-1-2022**	**4-30-2022**	4.8333	2.2298
6	**5-1-2022**	**7-31-2022**	1.6509	0.6295
7	**8-1-2022**	**10-31-2022**	1.4097	0.3883
8	**11-1-2022**	**1-31-2023**	2.2788	1.1031
9	**2-1-2023**	**4-30-2023**	2.3358	1.6268
10	**5-1-2023**	**7-31-2023**	1.9818	1.5416
11	**8-1-2023**	**10-31-2023**	8.6904	8.0174
12	**11-1-2023**	**1-31-2024**	12.0841	11.3127
13	**2-1-2024**	**4-30-2024**	1.9981	1.5975
14	**5-1-2024**	**7-31-2024**	1.9090	1.5031
15	**8-1-2024**	**10-31-2024**	1.9199	1.5140
16	**11-1-2024**	**1-31-2025**	1.9168	1.5229
17	**2-1-2025**	**4-30-2025**	1.7975	1.4391
18	**5-1-2025**	**7-31-2025**	1.8380	1.4676
19	**8-1-2025**	**10-31-2025**	1.8482	1.4778
20	**11-1-2025**	**1-31-2026**	1.8568	1.4863
21	**2-1-2026**	**4-30-2026**	1.7649	1.4066
22	**5-1-2026**	**7-31-2026**	1.8055	1.4350
23	**8-1-2026**	**10-31-2026**	1.8151	1.4447
24	**11-1-2026**	**1-31-2027**	1.8230	1.4525
25	**2-1-2027**	**4-30-2027**	1.7336	1.3753
26	**5-1-2027**	**7-31-2027**	1.7742	1.4038
27	**8-1-2027**	**10-31-2027**	1.7833	1.4128
28	**11-1-2027**	**1-31-2028**	1.7912	1.4208
29	**2-1-2028**	**4-30-2028**	1.7249	1.3625

30	**5-1-2028**	**7-31-2028**	1.7463	1.3759
31	**8-1-2028**	**9-30-2028**	1.1579	0.9123
		Highest	12.0841	11.3127

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.1638	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	2,552.0243	2,552.0243	0.1175	0.0454	2,568.5017
Mobile	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	243.3314	0.0000	243.3314	14.3805	0.0000	602.8431
Water						0.0000	0.0000		0.0000	0.0000	44.6810	119.5904	164.2714	4.6050	0.1103	312.2623
Total	**11.3156**	**7.9705**	**31.5878**	**0.1019**	**5.1905**	**0.2214**	**5.4119**	**1.4743**	**0.2166**	**1.6909**	**288.0124**	**11,170.3306**	**11,458.3429**	**19.4893**	**0.1585**	**11,992.7977**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6934	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	2,535.2112	2,535.2112	0.1153	0.0452	2,551.5523
Mobile	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	121.6657	0.0000	121.6657	7.1902	0.0000	301.4216
Water						0.0000	0.0000		0.0000	0.0000	35.7448	102.4059	138.1507	3.6849	0.0883	256.5980
Total	**9.8452**	**7.9705**	**31.5878**	**0.1019**	**5.1905**	**0.2214**	**5.4119**	**1.4743**	**0.2166**	**1.6909**	**157.4105**	**11,136.3330**	**11,293.7435**	**11.3767**	**0.1363**	**11,618.7624**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**45.35**	**0.30**	**1.44**	**41.63**	**14.02**	**3.12**

3.0 Construction Detail

Construction Phase

Point Molate - Residential Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2021	5/19/2021	5	78	
2	Site Preparation	Site Preparation	3/1/2021	7/1/2021	5	89	
3	Grading	Grading	4/1/2021	3/31/2022	5	261	
4	Paving	Paving	1/1/2022	6/24/2022	5	125	
5	Bay Trail Grading	Grading	3/1/2022	3/1/2023	5	262	
6	Building Construction	Building Construction	12/23/2022	11/30/2028	5	1550	
7	Architectural Coating	Architectural Coating	9/1/2023	2/1/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 4,574,880; Residential Outdoor: 1,524,960; Non-Residential Indoor: 67,500; Non-Residential Outdoor: 22,500; Striped Parking Area: 2,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Bay Trail Grading	Excavators	1	6.00	158	0.38
Bay Trail Grading	Graders	1	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	1	8.00	367	0.48
Bay Trail Grading	Paving Equipment	1	8.00	132	0.36
Bay Trail Grading	Plate Compactors	1	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	1	6.00	247	0.40
Bay Trail Grading	Scrapers	2	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	8	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
Demolition	6	15.00	0.00	227.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	43,069.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	9	23.00	0.00	1,306.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,002.00	466.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	400.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0246	0.0000	0.0246	3.7300e-003	0.0000	3.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1234	1.2262	0.8410	1.5100e-003		0.0605	0.0605		0.0562	0.0562	0.0000	132.6031	132.6031	0.0373	0.0000	133.5361
Total	**0.1234**	**1.2262**	**0.8410**	**1.5100e-003**	**0.0246**	**0.0605**	**0.0851**	**3.7300e-003**	**0.0562**	**0.0599**	**0.0000**	**132.6031**	**132.6031**	**0.0373**	**0.0000**	**133.5361**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	1.6800e-003	0.0000	1.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0180	0.0781	0.9079	1.5100e-003		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	132.6029	132.6029	0.0373	0.0000	133.5360
Total	**0.0180**	**0.0781**	**0.9079**	**1.5100e-003**	**0.0111**	**2.4000e-003**	**0.0135**	**1.6800e-003**	**2.4000e-003**	**4.0800e-003**	**0.0000**	**132.6029**	**132.6029**	**0.0373**	**0.0000**	**133.5360**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

3.3 Site Preparation - 2021

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					0.8040	0.0000	0.8040	0.4419	0.0000	0.4419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1730	1.8021	0.9414	1.6900e-003		0.0910	0.0910		0.0837	0.0837	0.0000	148.7889	148.7889	0.0481	0.0000	149.9920
Total	**0.1730**	**1.8021**	**0.9414**	**1.6900e-003**	**0.8040**	**0.0910**	**0.8949**	**0.4419**	**0.0837**	**0.5256**	**0.0000**	**148.7889**	**148.7889**	**0.0481**	**0.0000**	**149.9920**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3618	0.0000	0.3618	0.1989	0.0000	0.1989	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.0898	0.9287	1.6900e-003		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	148.7888	148.7888	0.0481	0.0000	149.9918
Total	**0.0207**	**0.0898**	**0.9287**	**1.6900e-003**	**0.3618**	**2.7600e-003**	**0.3645**	**0.1989**	**2.7600e-003**	**0.2016**	**0.0000**	**148.7888**	**148.7888**	**0.0481**	**0.0000**	**149.9918**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

3.4 Grading - 2021

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					0.6604	0.0000	0.6604	0.3342	0.0000	0.3342	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7790	8.7873	5.8014	0.0121		0.3596	0.3596		0.3308	0.3308	0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347
Total	**0.7790**	**8.7873**	**5.8014**	**0.0121**	**0.6604**	**0.3596**	**1.0200**	**0.3342**	**0.3308**	**0.6650**	**0.0000**	**1,061.4523**	**1,061.4523**	**0.3433**	**0.0000**	**1,070.0347**

3.4 Grading - 2021

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	0.1263	4.3518	0.8625	0.0126	0.3424	0.0138	0.3562	0.0922	0.0132	0.1053	0.0000	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1354**	**4.3582**	**0.9302**	**0.0128**	**0.3659**	**0.0139**	**0.3798**	**0.0984**	**0.0133**	**0.1117**	**0.0000**	**1,237.1363**	**1,237.1363**	**0.0538**	**0.0000**	**1,238.4823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2972	0.0000	0.2972	0.1504	0.0000	0.1504	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.1053	5.9685	0.0121		0.0776	0.0776		0.0727	0.0727	0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334
Total	**0.2582**	**2.1053**	**5.9685**	**0.0121**	**0.2972**	**0.0776**	**0.3748**	**0.1504**	**0.0727**	**0.2231**	**0.0000**	**1,061.4511**	**1,061.4511**	**0.3433**	**0.0000**	**1,070.0334**

3.4 Grading - 2021

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	0.1263	4.3518	0.8625	0.0126	0.3424	0.0138	0.3562	0.0922	0.0132	0.1053	0.0000	1,217.3046	1,217.3046	0.0534	0.0000	1,218.6393
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1354**	**4.3582**	**0.9302**	**0.0128**	**0.3659**	**0.0139**	**0.3798**	**0.0984**	**0.0133**	**0.1117**	**0.0000**	**1,237.1363**	**1,237.1363**	**0.0538**	**0.0000**	**1,238.4823**

3.4 Grading - 2022

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					0.2599	0.0000	0.2599	0.1140	0.0000	0.1140	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2209	2.3878	1.7454	3.9300e-003		0.0970	0.0970		0.0892	0.0892	0.0000	345.2407	345.2407	0.1117	0.0000	348.0322
Total	**0.2209**	**2.3878**	**1.7454**	**3.9300e-003**	**0.2599**	**0.0970**	**0.3569**	**0.1140**	**0.0892**	**0.2033**	**0.0000**	**345.2407**	**345.2407**	**0.1117**	**0.0000**	**348.0322**

3.4 Grading - 2022

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	0.0387	1.2964	0.2750	4.0400e-003	0.2958	3.8100e-003	0.2996	0.0753	3.6500e-003	0.0789	0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0414**	**1.2982**	**0.2952**	**4.1100e-003**	**0.3034**	**3.8600e-003**	**0.3073**	**0.0773**	**3.6900e-003**	**0.0810**	**0.0000**	**396.3892**	**396.3892**	**0.0169**	**0.0000**	**396.8127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1170	0.0000	0.1170	0.0513	0.0000	0.0513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0786	0.5995	1.9088	3.9300e-003		0.0220	0.0220		0.0207	0.0207	0.0000	345.2403	345.2403	0.1117	0.0000	348.0318
Total	**0.0786**	**0.5995**	**1.9088**	**3.9300e-003**	**0.1170**	**0.0220**	**0.1390**	**0.0513**	**0.0207**	**0.0720**	**0.0000**	**345.2403**	**345.2403**	**0.1117**	**0.0000**	**348.0318**

3.4 Grading - 2022

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	0.0387	1.2964	0.2750	4.0400e-003	0.2958	3.8100e-003	0.2996	0.0753	3.6500e-003	0.0789	0.0000	390.1857	390.1857	0.0168	0.0000	390.6059
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0414**	**1.2982**	**0.2952**	**4.1100e-003**	**0.3034**	**3.8600e-003**	**0.3073**	**0.0773**	**3.6900e-003**	**0.0810**	**0.0000**	**396.3892**	**396.3892**	**0.0169**	**0.0000**	**396.8127**

3.5 Paving - 2022

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1722	125.1722	0.0405	0.0000	126.1843
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1722**	**125.1722**	**0.0405**	**0.0000**	**126.1843**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1721	125.1721	0.0405	0.0000	126.1842
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1721**	**125.1721**	**0.0405**	**0.0000**	**126.1842**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

3.6 Bay Trail Grading - 2022

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					0.4966	0.0000	0.4966	0.2721	0.0000	0.2721	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4053	4.1437	3.0396	7.4600e-003		0.1689	0.1689		0.1555	0.1555	0.0000	654.0597	654.0597	0.2108	0.0000	659.3293
Total	**0.4053**	**4.1437**	**3.0396**	**7.4600e-003**	**0.4966**	**0.1689**	**0.6655**	**0.2721**	**0.1555**	**0.4276**	**0.0000**	**654.0597**	**654.0597**	**0.2108**	**0.0000**	**659.3293**

3.6 Bay Trail Grading - 2022

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	3.9900e-003	0.1340	0.0284	4.2000e-004	0.0106	3.9000e-004	0.0110	2.8800e-003	3.8000e-004	3.2500e-003	0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0112**	**0.1389**	**0.0814**	**6.0000e-004**	**0.0306**	**5.2000e-004**	**0.0311**	**8.1900e-003**	**5.0000e-004**	**8.6800e-003**	**0.0000**	**56.6070**	**56.6070**	**2.0800e-003**	**0.0000**	**56.6590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2235	0.0000	0.2235	0.1224	0.0000	0.1224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1395	1.0055	3.6043	7.4600e-003		0.0384	0.0384		0.0361	0.0361	0.0000	654.0590	654.0590	0.2108	0.0000	659.3286
Total	**0.1395**	**1.0055**	**3.6043**	**7.4600e-003**	**0.2235**	**0.0384**	**0.2619**	**0.1224**	**0.0361**	**0.1586**	**0.0000**	**654.0590**	**654.0590**	**0.2108**	**0.0000**	**659.3286**

3.6 Bay Trail Grading - 2022

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	3.9900e-003	0.1340	0.0284	4.2000e-004	0.0106	3.9000e-004	0.0110	2.8800e-003	3.8000e-004	3.2500e-003	0.0000	40.3323	40.3323	1.7400e-003	0.0000	40.3757
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0112**	**0.1389**	**0.0814**	**6.0000e-004**	**0.0306**	**5.2000e-004**	**0.0311**	**8.1900e-003**	**5.0000e-004**	**8.6800e-003**	**0.0000**	**56.6070**	**56.6070**	**2.0800e-003**	**0.0000**	**56.6590**

3.6 Bay Trail Grading - 2023

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					0.0991	0.0000	0.0991	0.0536	0.0000	0.0536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0740	0.7283	0.5768	1.4700e-003		0.0293	0.0293		0.0270	0.0270	0.0000	128.4369	128.4369	0.0414	0.0000	129.4717
Total	**0.0740**	**0.7283**	**0.5768**	**1.4700e-003**	**0.0991**	**0.0293**	**0.1284**	**0.0536**	**0.0270**	**0.0806**	**0.0000**	**128.4369**	**128.4369**	**0.0414**	**0.0000**	**129.4717**

3.6 Bay Trail Grading - 2023

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	5.4000e-004	0.0173	5.0300e-003	8.0000e-005	8.7500e-003	3.0000e-005	8.7800e-003	2.2000e-003	3.0000e-005	2.2300e-003	0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.8700e-003**	**0.0182**	**0.0146**	**1.1000e-004**	**0.0127**	**5.0000e-005**	**0.0127**	**3.2400e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**10.6888**	**10.6888**	**3.6000e-004**	**0.0000**	**10.6977**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0446	0.0000	0.0446	0.0241	0.0000	0.0241	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.1874	0.7054	1.4700e-003		7.1300e-003	7.1300e-003		6.7200e-003	6.7200e-003	0.0000	128.4368	128.4368	0.0414	0.0000	129.4716
Total	**0.0269**	**0.1874**	**0.7054**	**1.4700e-003**	**0.0446**	**7.1300e-003**	**0.0518**	**0.0241**	**6.7200e-003**	**0.0309**	**0.0000**	**128.4368**	**128.4368**	**0.0414**	**0.0000**	**129.4716**

3.6 Bay Trail Grading - 2023

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	5.4000e-004	0.0173	5.0300e-003	8.0000e-005	8.7500e-003	3.0000e-005	8.7800e-003	2.2000e-003	3.0000e-005	2.2300e-003	0.0000	7.6175	7.6175	3.0000e-004	0.0000	7.6249
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.8700e-003**	**0.0182**	**0.0146**	**1.1000e-004**	**0.0127**	**5.0000e-005**	**0.0127**	**3.2400e-003**	**5.0000e-005**	**3.3000e-003**	**0.0000**	**10.6888**	**10.6888**	**3.6000e-004**	**0.0000**	**10.6977**

3.7 Building Construction - 2022

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	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.2700e-003	0.1365	0.0344	3.7000e-004	9.1900e-003	2.8000e-004	9.4800e-003	2.6600e-003	2.7000e-004	2.9300e-003	0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker	0.0173	0.0117	0.1264	4.3000e-004	0.0476	3.0000e-004	0.0479	0.0127	2.8000e-004	0.0130	0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total	**0.0216**	**0.1481**	**0.1608**	**8.0000e-004**	**0.0568**	**5.8000e-004**	**0.0574**	**0.0153**	**5.5000e-004**	**0.0159**	**0.0000**	**74.6076**	**74.6076**	**2.4100e-003**	**0.0000**	**74.6679**

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	9.8000e-004	6.7000e-003	0.0524	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**9.8000e-004**	**6.7000e-003**	**0.0524**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.2700e-003	0.1365	0.0344	3.7000e-004	9.1900e-003	2.8000e-004	9.4800e-003	2.6600e-003	2.7000e-004	2.9300e-003	0.0000	35.7965	35.7965	1.5900e-003	0.0000	35.8363
Worker	0.0173	0.0117	0.1264	4.3000e-004	0.0476	3.0000e-004	0.0479	0.0127	2.8000e-004	0.0130	0.0000	38.8111	38.8111	8.2000e-004	0.0000	38.8317
Total	**0.0216**	**0.1481**	**0.1608**	**8.0000e-004**	**0.0568**	**5.8000e-004**	**0.0574**	**0.0153**	**5.5000e-004**	**0.0159**	**0.0000**	**74.6076**	**74.6076**	**2.4100e-003**	**0.0000**	**74.6679**

3.7 Building Construction - 2023

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.7 Building Construction - 2023

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	0.1396	4.5017	1.3296	0.0158	0.3985	5.3700e-003	0.4038	0.1152	5.1400e-003	0.1203	0.0000	1,508.0032	1,508.0032	0.0567	0.0000	1,509.4213
Worker	0.6980	0.4536	5.0353	0.0179	2.0642	0.0128	2.0770	0.5490	0.0118	0.5608	0.0000	1,616.4807	1,616.4807	0.0319	0.0000	1,617.2777
Total	**0.8375**	**4.9553**	**6.3649**	**0.0336**	**2.4626**	**0.0182**	**2.4808**	**0.6642**	**0.0170**	**0.6811**	**0.0000**	**3,124.4839**	**3,124.4839**	**0.0886**	**0.0000**	**3,126.6991**

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	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.7 Building Construction - 2023

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	0.1396	4.5017	1.3296	0.0158	0.3985	5.3700e-003	0.4038	0.1152	5.1400e-003	0.1203	0.0000	1,508.0032	1,508.0032	0.0567	0.0000	1,509.4213
Worker	0.6980	0.4536	5.0353	0.0179	2.0642	0.0128	2.0770	0.5490	0.0118	0.5608	0.0000	1,616.4807	1,616.4807	0.0319	0.0000	1,617.2777
Total	**0.8375**	**4.9553**	**6.3649**	**0.0336**	**2.4626**	**0.0182**	**2.4808**	**0.6642**	**0.0170**	**0.6811**	**0.0000**	**3,124.4839**	**3,124.4839**	**0.0886**	**0.0000**	**3,126.6991**

3.7 Building Construction - 2024

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.7 Building Construction - 2024

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	0.1358	4.4765	1.2848	0.0158	0.4015	5.3000e-003	0.4068	0.1161	5.0700e-003	0.1212	0.0000	1,509.6770	1,509.6770	0.0556	0.0000	1,511.0675
Worker	0.6581	0.4120	4.6922	0.0173	2.0800	0.0127	2.0927	0.5532	0.0117	0.5649	0.0000	1,563.4979	1,563.4979	0.0289	0.0000	1,564.2198
Total	**0.7938**	**4.8885**	**5.9770**	**0.0330**	**2.4816**	**0.0180**	**2.4995**	**0.6693**	**0.0167**	**0.6860**	**0.0000**	**3,073.1749**	**3,073.1749**	**0.0845**	**0.0000**	**3,075.2872**

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	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0429**	**0.2928**	**2.2873**	**3.5300e-003**		**5.3400e-003**	**5.3400e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.7 Building Construction - 2024

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	0.1358	4.4765	1.2848	0.0158	0.4015	5.3000e-003	0.4068	0.1161	5.0700e-003	0.1212	0.0000	1,509.6770	1,509.6770	0.0556	0.0000	1,511.0675
Worker	0.6581	0.4120	4.6922	0.0173	2.0800	0.0127	2.0927	0.5532	0.0117	0.5649	0.0000	1,563.4979	1,563.4979	0.0289	0.0000	1,564.2198
Total	**0.7938**	**4.8885**	**5.9770**	**0.0330**	**2.4816**	**0.0180**	**2.4995**	**0.6693**	**0.0167**	**0.6860**	**0.0000**	**3,073.1749**	**3,073.1749**	**0.0845**	**0.0000**	**3,075.2872**

3.7 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2025

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	0.1312	4.3973	1.2383	0.0156	0.4000	5.1700e-003	0.4052	0.1156	4.9400e-003	0.1206	0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker	0.6170	0.3725	4.3235	0.0165	2.0721	0.0124	2.0845	0.5511	0.0114	0.5625	0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total	**0.7482**	**4.7698**	**5.5618**	**0.0321**	**2.4721**	**0.0176**	**2.4897**	**0.6667**	**0.0164**	**0.6831**	**0.0000**	**2,987.6514**	**2,987.6514**	**0.0800**	**0.0000**	**2,989.6502**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2025

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	0.1312	4.3973	1.2383	0.0156	0.4000	5.1700e-003	0.4052	0.1156	4.9400e-003	0.1206	0.0000	1,494.3974	1,494.3974	0.0539	0.0000	1,495.7457
Worker	0.6170	0.3725	4.3235	0.0165	2.0721	0.0124	2.0845	0.5511	0.0114	0.5625	0.0000	1,493.2540	1,493.2540	0.0260	0.0000	1,493.9045
Total	**0.7482**	**4.7698**	**5.5618**	**0.0321**	**2.4721**	**0.0176**	**2.4897**	**0.6667**	**0.0164**	**0.6831**	**0.0000**	**2,987.6514**	**2,987.6514**	**0.0800**	**0.0000**	**2,989.6502**

3.7 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2026

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	0.1277	4.3363	1.2071	0.0155	0.4000	5.0400e-003	0.4051	0.1157	4.8100e-003	0.1205	0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker	0.5835	0.3403	4.0212	0.0159	2.0721	0.0121	2.0842	0.5511	0.0111	0.5622	0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total	**0.7112**	**4.6765**	**5.2284**	**0.0314**	**2.4721**	**0.0171**	**2.4892**	**0.6667**	**0.0159**	**0.6827**	**0.0000**	**2,922.6673**	**2,922.6673**	**0.0762**	**0.0000**	**2,924.5725**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2026

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	0.1277	4.3363	1.2071	0.0155	0.4000	5.0400e-003	0.4051	0.1157	4.8100e-003	0.1205	0.0000	1,485.7378	1,485.7378	0.0526	0.0000	1,487.0517
Worker	0.5835	0.3403	4.0212	0.0159	2.0721	0.0121	2.0842	0.5511	0.0111	0.5622	0.0000	1,436.9296	1,436.9296	0.0237	0.0000	1,437.5208
Total	**0.7112**	**4.6765**	**5.2284**	**0.0314**	**2.4721**	**0.0171**	**2.4892**	**0.6667**	**0.0159**	**0.6827**	**0.0000**	**2,922.6673**	**2,922.6673**	**0.0762**	**0.0000**	**2,924.5725**

3.7 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2027

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	0.1247	4.2743	1.1822	0.0154	0.4000	4.9100e-003	0.4050	0.1157	4.6900e-003	0.1204	0.0000	1,477.5860	1,477.5860	0.0513	0.0000	1,478.8675
Worker	0.5516	0.3119	3.7554	0.0153	2.0721	0.0115	2.0836	0.5511	0.0105	0.5616	0.0000	1,387.1900	1,387.1900	0.0216	0.0000	1,387.7291
Total	**0.6764**	**4.5862**	**4.9376**	**0.0307**	**2.4721**	**0.0164**	**2.4885**	**0.6667**	**0.0152**	**0.6820**	**0.0000**	**2,864.7760**	**2,864.7760**	**0.0728**	**0.0000**	**2,866.5965**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2027

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	0.1247	4.2743	1.1822	0.0154	0.4000	4.9100e-003	0.4050	0.1157	4.6900e-003	0.1204	0.0000	1,477.5860	1,477.5860	0.0513	0.0000	1,478.8675
Worker	0.5516	0.3119	3.7554	0.0153	2.0721	0.0115	2.0836	0.5511	0.0105	0.5616	0.0000	1,387.1900	1,387.1900	0.0216	0.0000	1,387.7291
Total	**0.6764**	**4.5862**	**4.9376**	**0.0307**	**2.4721**	**0.0164**	**2.4885**	**0.6667**	**0.0152**	**0.6820**	**0.0000**	**2,864.7760**	**2,864.7760**	**0.0728**	**0.0000**	**2,866.5965**

3.7 Building Construction - 2028

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	0.1634	1.4901	1.9221	3.2200e-003		0.0630	0.0630		0.0593	0.0593	0.0000	277.1438	277.1438	0.0652	0.0000	278.7724
Total	**0.1634**	**1.4901**	**1.9221**	**3.2200e-003**		**0.0630**	**0.0630**		**0.0593**	**0.0593**	**0.0000**	**277.1438**	**277.1438**	**0.0652**	**0.0000**	**278.7724**

3.7 Building Construction - 2028

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	0.1120	3.8666	1.0666	0.0141	0.3663	4.4000e-003	0.3707	0.1059	4.2000e-003	0.1101	0.0000	1,346.8381	1,346.8381	0.0459	0.0000	1,347.9848
Worker	0.4756	0.2627	3.2260	0.0136	1.8974	9.7300e-003	1.9072	0.5046	8.9500e-003	0.5136	0.0000	1,230.3164	1,230.3164	0.0181	0.0000	1,230.7689
Total	**0.5876**	**4.1293**	**4.2926**	**0.0276**	**2.2638**	**0.0141**	**2.2779**	**0.6105**	**0.0132**	**0.6237**	**0.0000**	**2,577.1544**	**2,577.1544**	**0.0640**	**0.0000**	**2,578.7537**

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	0.0392	0.2671	2.0865	3.2200e-003		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	277.1434	277.1434	0.0652	0.0000	278.7721
Total	**0.0392**	**0.2671**	**2.0865**	**3.2200e-003**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**277.1434**	**277.1434**	**0.0652**	**0.0000**	**278.7721**

3.7 Building Construction - 2028

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	0.1120	3.8666	1.0666	0.0141	0.3663	4.4000e-003	0.3707	0.1059	4.2000e-003	0.1101	0.0000	1,346.8381	1,346.8381	0.0459	0.0000	1,347.9848
Worker	0.4756	0.2627	3.2260	0.0136	1.8974	9.7300e-003	1.9072	0.5046	8.9500e-003	0.5136	0.0000	1,230.3164	1,230.3164	0.0181	0.0000	1,230.7689
Total	**0.5876**	**4.1293**	**4.2926**	**0.0276**	**2.2638**	**0.0141**	**2.2779**	**0.6105**	**0.0132**	**0.6237**	**0.0000**	**2,577.1544**	**2,577.1544**	**0.0640**	**0.0000**	**2,578.7537**

3.8 Architectural Coating - 2023

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	12.6236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0659	0.4482	0.6230	1.0200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	87.8319	87.8319	5.2500e-003	0.0000	87.9633
Total	**12.6895**	**0.4482**	**0.6230**	**1.0200e-003**		**0.0244**	**0.0244**		**0.0244**	**0.0244**	**0.0000**	**87.8319**	**87.8319**	**5.2500e-003**	**0.0000**	**87.9633**

3.8 Architectural Coating - 2023

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	0.0461	0.0300	0.3328	1.1800e-003	0.1364	8.5000e-004	0.1373	0.0363	7.8000e-004	0.0371	0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total	**0.0461**	**0.0300**	**0.3328**	**1.1800e-003**	**0.1364**	**8.5000e-004**	**0.1373**	**0.0363**	**7.8000e-004**	**0.0371**	**0.0000**	**106.8296**	**106.8296**	**2.1100e-003**	**0.0000**	**106.8823**

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	12.6236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0443	0.6304	1.0200e-003		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632
Total	**12.6338**	**0.0443**	**0.6304**	**1.0200e-003**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**87.8318**	**87.8318**	**5.2500e-003**	**0.0000**	**87.9632**

3.8 Architectural Coating - 2023

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	0.0461	0.0300	0.3328	1.1800e-003	0.1364	8.5000e-004	0.1373	0.0363	7.8000e-004	0.0371	0.0000	106.8296	106.8296	2.1100e-003	0.0000	106.8823
Total	**0.0461**	**0.0300**	**0.3328**	**1.1800e-003**	**0.1364**	**8.5000e-004**	**0.1373**	**0.0363**	**7.8000e-004**	**0.0371**	**0.0000**	**106.8296**	**106.8296**	**2.1100e-003**	**0.0000**	**106.8823**

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1170	0.1738	2.9000e-004		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.5402**	**0.1170**	**0.1738**	**2.9000e-004**		**5.8500e-003**	**5.8500e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

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	0.0120	7.5400e-003	0.0859	3.2000e-004	0.0381	2.3000e-004	0.0383	0.0101	2.1000e-004	0.0103	0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total	**0.0120**	**7.5400e-003**	**0.0859**	**3.2000e-004**	**0.0381**	**2.3000e-004**	**0.0383**	**0.0101**	**2.1000e-004**	**0.0103**	**0.0000**	**28.6156**	**28.6156**	**5.3000e-004**	**0.0000**	**28.6288**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5229					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1759	2.9000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.5257**	**0.0124**	**0.1759**	**2.9000e-004**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

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	0.0120	7.5400e-003	0.0859	3.2000e-004	0.0381	2.3000e-004	0.0383	0.0101	2.1000e-004	0.0103	0.0000	28.6156	28.6156	5.3000e-004	0.0000	28.6288
Total	**0.0120**	**7.5400e-003**	**0.0859**	**3.2000e-004**	**0.0381**	**2.3000e-004**	**0.0383**	**0.0101**	**2.1000e-004**	**0.0103**	**0.0000**	**28.6156**	**28.6156**	**5.3000e-004**	**0.0000**	**28.6288**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054
Unmitigated	2.9226	6.0408	30.1798	0.0893	5.1905	0.0706	5.2611	1.4743	0.0659	1.5401	0.0000	8,246.7789	8,246.7789	0.3691	0.0000	8,256.0054

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,544.40	1,678.82	1421.42	3,570,732	3,570,732
Apartments Low Rise	1,890.00	2,054.50	1739.50	4,369,777	4,369,777
Apartments Mid Rise	1,375.50	1,319.50	1211.00	3,104,112	3,104,112
Apartments Mid Rise	1,858.89	1,783.21	1636.58	4,194,986	4,194,986
Apartments Mid Rise	1,206.51	1,157.39	1062.22	2,722,750	2,722,750
City Park	56.70	682.50	502.20	447,770	447,770
City Park	5.16	62.11	45.70	40,747	40,747
Convenience Market (24 Hour)	0.00	0.00	0.00		
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Single Family Housing	1,893.34	1,970.06	1715.24	4,339,422	4,339,422
Unenclosed Parking Structure	202.00	202.00	202.00	153,839	153,839
Total	10,954.90	11,933.49	10,178.46	24,260,593	24,260,593

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Unenclosed Parking Structure	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Apartments Mid Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
City Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Convenience Market (24 Hour)	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Quality Restaurant	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Regional Shopping Center	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Single Family Housing	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Unenclosed Parking Structure	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	587.2870	587.2870	0.0780	9.4500e-003	592.0525
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	604.1000	604.1000	0.0802	9.7200e-003	609.0019
NaturalGas Mitigated	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	1,947.9243	1,947.9243	0.0373	0.0357	1,959.4998
NaturalGas Unmitigated	0.1968	1.6924	0.7918	0.0107		0.1360	0.1360		0.1360	0.1360	0.0000	1,947.9243	1,947.9243	0.0373	0.0357	1,959.4998

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.58171e+006	0.0301	0.2572	0.1095	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.8612	297.8612	5.7100e-003	5.4600e-003	299.6312
Apartments Low Rise	6.83076e+006	0.0368	0.3148	0.1339	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	364.5154	364.5154	6.9900e-003	6.6800e-003	366.6816
Apartments Mid Rise	2.71427e+006	0.0146	0.1251	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.8436	144.8436	2.7800e-003	2.6600e-003	145.7044
Apartments Mid Rise	3.09444e+006	0.0167	0.1426	0.0607	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.1312	165.1312	3.1700e-003	3.0300e-003	166.1125
Apartments Mid Rise	4.18192e+006	0.0226	0.1927	0.0820	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	223.1630	223.1630	4.2800e-003	4.0900e-003	224.4891
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1968**	**1.6924**	**0.7918**	**0.0107**		**0.1360**	**0.1360**		**0.1360**	**0.1360**	**0.0000**	**1,947.9243**	**1,947.9243**	**0.0374**	**0.0357**	**1,959.4998**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.58171e+006	0.0301	0.2572	0.1095	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.8612	297.8612	5.7100e-003	5.4600e-003	299.6312
Apartments Low Rise	6.83076e+006	0.0368	0.3148	0.1339	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	364.5154	364.5154	6.9900e-003	6.6800e-003	366.6816
Apartments Mid Rise	2.71427e+006	0.0146	0.1251	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.8436	144.8436	2.7800e-003	2.6600e-003	145.7044
Apartments Mid Rise	3.09444e+006	0.0167	0.1426	0.0607	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.1312	165.1312	3.1700e-003	3.0300e-003	166.1125
Apartments Mid Rise	4.18192e+006	0.0226	0.1927	0.0820	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	223.1630	223.1630	4.2800e-003	4.0900e-003	224.4891
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1968**	**1.6924**	**0.7918**	**0.0107**		**0.1360**	**0.1360**		**0.1360**	**0.1360**	**0.0000**	**1,947.9243**	**1,947.9243**	**0.0374**	**0.0357**	**1,959.4998**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.20719e+006	136.1098	0.0181	2.1900e-003	137.2143
Apartments Mid Rise	1.37627e+006	155.1741	0.0206	2.5000e-003	156.4332
Apartments Mid Rise	1.85994e+006	209.7067	0.0278	3.3700e-003	211.4083
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Quality Restaurant	294800	66.4771	8.8300e-003	1.0700e-003	67.0165
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**604.1000**	**0.0802**	**9.7200e-003**	**609.0019**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.1746e+006	132.4353	0.0176	2.1300e-003	133.5099
Apartments Mid Rise	1.33912e+006	150.9849	0.0200	2.4300e-003	152.2100
Apartments Mid Rise	1.80972e+006	204.0452	0.0271	3.2800e-003	205.7009
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Quality Restaurant	280220	63.1893	8.3900e-003	1.0200e-003	63.7021
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**587.2870**	**0.0780**	**9.4500e-003**	**592.0525**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6934	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Unmitigated	8.1638	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6146					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**8.1638**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1443					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5340					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**6.6934**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	138.1507	3.6849	0.0883	256.5980
Unmitigated	164.2714	4.6050	0.1103	312.2623

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	41.438 / 26.1239	48.7362	1.3550	0.0325	92.2824
Apartments Mid Rise	73.624 / 46.4152	86.5911	2.4074	0.0577	163.9609
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.370363 / 0.226996	0.4330	0.0121	2.9000e-004	0.8222
Quality Restaurant	6.07067 / 0.38749	5.7825	0.1983	4.7300e-003	12.1510
Regional Shopping Center	1.48145 / 0.907986	1.7321	0.0484	1.1600e-003	3.2889
Single Family Housing	17.8522 / 11.2546	20.9964	0.5838	0.0140	39.7569
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**164.2714**	**4.6050**	**0.1103**	**312.2623**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	33.1504 / 26.1239	41.0508	1.0843	0.0260	75.9045
Apartments Mid Rise	58.8992 / 46.4152	72.9362	1.9264	0.0462	134.8617
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.29629 / 0.226996	0.3643	9.6900e-003	2.3000e-004	0.6758
Quality Restaurant	4.85654 / 0.38749	4.6566	0.1587	3.7900e-003	9.7516
Regional Shopping Center	1.18516 / 0.907986	1.4574	0.0388	9.3000e-004	2.7033
Single Family Housing	14.2818 / 11.2546	17.6854	0.4671	0.0112	32.7010
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**138.1507**	**3.6849**	**0.0883**	**256.5980**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	121.6657	7.1902	0.0000	301.4216
Unmitigated	243.3314	14.3805	0.0000	602.8431

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	292.56	59.3870	3.5097	0.0000	147.1289
Apartments Mid Rise	519.8	105.5147	6.2357	0.0000	261.4082
City Park	2.81	0.5704	0.0337	0.0000	1.4132
Convenience Market (24 Hour)	15.03	3.0510	0.1803	0.0000	7.5586
Quality Restaurant	18.25	3.7046	0.2189	0.0000	9.1780
Regional Shopping Center	21	4.2628	0.2519	0.0000	10.5609
Single Family Housing	329.28	66.8409	3.9502	0.0000	165.5954
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**243.3314**	**14.3805**	**0.0000**	**602.8431**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	146.28	29.6935	1.7548	0.0000	73.5644
Apartments Mid Rise	259.9	52.7574	3.1179	0.0000	130.7041
City Park	1.405	0.2852	0.0169	0.0000	0.7066
Convenience Market (24 Hour)	7.515	1.5255	0.0902	0.0000	3.7793
Quality Restaurant	9.125	1.8523	0.1095	0.0000	4.5890
Regional Shopping Center	10.5	2.1314	0.1260	0.0000	5.2805
Single Family Housing	164.64	33.4204	1.9751	0.0000	82.7977
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**121.6657**	**7.1902**	**0.0000**	**301.4216**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	2	50	2682	0.73	Diesel
Emergency Generator	1	2	50	2682	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Total	**0.0324**	**0.1079**	**0.5611**	**1.0600e-003**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**102.1298**	**102.1298**	**0.0143**	**0.0000**	**102.4878**

11.0 Vegetation

Point Molate - Commercial Heavy - Full Build Out with Mitigation

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	354.57	1000sqft	4.27	354,570.00	0
Office Park	230.00	1000sqft	2.77	230,000.00	0
Unenclosed Parking Structure	100.00	Space	0.00	40,000.00	0
City Park	30.00	Acre	30.00	1,306,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Apartments Low Rise	336.00	Dwelling Unit	11.03	336,000.00	961
Apartments Low Rise	300.00	Dwelling Unit	9.85	300,000.00	858
Apartments Mid Rise	350.00	Dwelling Unit	4.83	350,000.00	1001
Single Family Housing	274.00	Dwelling Unit	46.74	493,200.00	784
Convenience Market (24 Hour)	5.00	1000sqft	0.00	5,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				

CO2 Intensity (lb/MWhr)	248.57	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project operational year = 2024. Updated electricity emission factors to incorporate RPS for 2024.

Land Use - CalEEMod acerage scaled to match project acerage of 80 acres for Residential, office, retail and restaurant.

Construction Phase - Construction duration is from 2/1/2021 to 11/30/2028 based on Suncal schedule. Total construction days match inputs provided by AES. Exact start and end dates are defined by CalEEMod and won't exactly match AES/SunCal inputs.

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment -

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment -

Trips and VMT - CalEEMod default trip rates

Demolition - Input provided by AES/developer.

Grading - Total soil quantity exported is 355,000 cu yd. Grading area for bay trail development is 2.73 acres. Grading area for project is 90 acres.

Road Dust - Road Silt Loading set to 0.047 g/m2

Consumer Products - VOC emission factor for consumer products is the county specific VOC factor

Landscape Equipment - Total landscaping days set to zero

Energy Use - 2019 Title-24 energy reductions applied to energy intensity factors for non-historical buildings. Rooftop PV is required per 2019 T24 to match total lighting/electricity usage for Low-rise and Single Family units.

Area Mitigation - Assuming "super-compliant" VOC paint for indoor and outdoor coatings - EFs from SCAQMD Rule 1113.

Energy Mitigation - Applying energy efficient appliances to residential units and restaurant.

Water Mitigation - Applying low-flow faucets, toilets and showers for indoor water use, with default reduction percentages.

Waste Mitigation - Applying 50% solid waste reduction measure.

Table Name	Column Name	Default Value	New Value
tblApplianceMitigation	PercentImprovement	15.00	30.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	998,460.00	1,025,460.00

tblArchitecturalCoating	ConstArea_Residential_Interior	2,995,380.00	3,076,380.00
tblAreaCoating	Area_Residential_Exterior	998460	1025460
tblAreaCoating	Area_Residential_Interior	2995380	3076380
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	10
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Point Molate - Commercial Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	78.00
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	NumDays	310.00	262.00
tblConstructionPhase	NumDays	220.00	125.00
tblConstructionPhase	NumDays	120.00	89.00
tblConsumerProducts	ROG_EF	2.14E-05	1.55E-05
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	LightingElect	741.44	667.30
tblEnergyUse	LightingElect	4.88	5.88
tblEnergyUse	LightingElect	3.47	3.77
tblEnergyUse	LightingElect	5.34	5.61
tblEnergyUse	LightingElect	4.88	5.12
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	1.75	1.14
tblEnergyUse	NT24E	3,172.76	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	0.70	1.00

tblEnergyUse	NT24NG	1.17	1.00
tblEnergyUse	NT24NG	128.02	128.00
tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	T24E	233.06	0.00
tblEnergyUse	T24E	426.45	383.81
tblEnergyUse	T24E	2.24	2.90
tblEnergyUse	T24E	4.27	4.93
tblEnergyUse	T24E	2.67	2.90
tblEnergyUse	T24E	2.24	2.45
tblEnergyUse	T24E	217.68	0.00
tblEnergyUse	T24NG	17,734.50	16,901.46
tblEnergyUse	T24NG	6,115.43	5,827.60
tblEnergyUse	T24NG	3.90	5.00
tblEnergyUse	T24NG	17.44	19.36
tblEnergyUse	T24NG	39.90	41.30
tblEnergyUse	T24NG	3.90	4.48
tblEnergyUse	T24NG	39,708.76	35,976.35
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	95.40	600.00
tblFireplaces	NumberGas	52.50	0.00
tblFireplaces	NumberGas	68.50	0.00

tblFireplaces	NumberNoFireplace	25.44	0.00
tblFireplaces	NumberNoFireplace	14.00	0.00
tblFireplaces	NumberNoFireplace	21.92	0.00
tblFireplaces	NumberWood	108.12	0.00
tblFireplaces	NumberWood	59.50	0.00
tblFireplaces	NumberWood	117.82	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06

tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003

tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004

tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003

tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblGrading	AcresOfGrading	1,696.50	90.00
tblGrading	AcresOfGrading	622.25	2.73
tblGrading	MaterialExported	0.00	344,550.00
tblGrading	MaterialExported	0.00	10,450.00
tblLandUse	LotAcreage	5.28	2.77
tblLandUse	LotAcreage	8.14	4.27
tblLandUse	LotAcreage	0.90	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	18.75	9.85
tblLandUse	LotAcreage	21.00	11.03
tblLandUse	LotAcreage	9.21	4.83

tblLandUse	LotAcreage	88.96	46.74
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblOffRoadEquipment	HorsePower	402.00	367.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	641.35	248.57
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblRoadDust	RoadSiltLoading	0.1	0.047
tblSolidWaste	SolidWasteGenerationRate	292.56	310.96
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004

tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblVehicleEF	HHD	0.41	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.58	6.28
tblVehicleEF	HHD	0.84	0.40
tblVehicleEF	HHD	2.87	5.3000e-003
tblVehicleEF	HHD	4,335.05	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.83	5.34
tblVehicleEF	HHD	1.90	2.66
tblVehicleEF	HHD	19.75	2.36
tblVehicleEF	HHD	7.9210e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	7.5790e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.41	0.42

tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3500e-004	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.39	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.15	6.28
tblVehicleEF	HHD	0.85	0.40
tblVehicleEF	HHD	2.61	5.3000e-003
tblVehicleEF	HHD	4,592.60	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	14.28	5.34
tblVehicleEF	HHD	1.83	2.66
tblVehicleEF	HHD	19.74	2.36
tblVehicleEF	HHD	6.6780e-003	2.6000e-003

tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	6.3890e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.39	0.42
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3100e-004	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.45	0.49
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.45	0.02

tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.17	6.28
tblVehicleEF	HHD	0.83	0.40
tblVehicleEF	HHD	3.11	5.3000e-003
tblVehicleEF	HHD	3,979.39	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.22	5.34
tblVehicleEF	HHD	1.93	2.66
tblVehicleEF	HHD	19.77	2.36
tblVehicleEF	HHD	9.6380e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	9.2210e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.8100e-004	0.00

tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3900e-004	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.51	0.49
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	LDA	3.2820e-003	1.8000e-003
tblVehicleEF	LDA	4.5120e-003	0.05
tblVehicleEF	LDA	0.48	0.52
tblVehicleEF	LDA	1.04	2.15
tblVehicleEF	LDA	229.87	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09

tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.2620e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3010e-003	2.4000e-003
tblVehicleEF	LDA	5.4600e-004	5.0000e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	3.7280e-003	1.8000e-003
tblVehicleEF	LDA	3.6390e-003	0.05
tblVehicleEF	LDA	0.58	0.52
tblVehicleEF	LDA	0.80	2.15
tblVehicleEF	LDA	251.31	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.07	0.04

tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	9.3650e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.21
tblVehicleEF	LDA	2.5170e-003	2.4000e-003
tblVehicleEF	LDA	5.4200e-004	5.0000e-004
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.23
tblVehicleEF	LDA	3.1830e-003	1.8000e-003
tblVehicleEF	LDA	5.1540e-003	0.05
tblVehicleEF	LDA	0.47	0.52
tblVehicleEF	LDA	1.24	2.15
tblVehicleEF	LDA	226.93	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003

tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	8.0170e-003	6.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.2720e-003	2.4000e-003
tblVehicleEF	LDA	5.4900e-004	5.0000e-004
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDT1	6.8390e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.88	0.87
tblVehicleEF	LDT1	2.31	2.34
tblVehicleEF	LDT1	287.67	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.13	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003

tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.15	0.32
tblVehicleEF	LDT1	2.8860e-003	2.8000e-003
tblVehicleEF	LDT1	7.0800e-004	6.0000e-004
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.16	0.35
tblVehicleEF	LDT1	7.6930e-003	3.8000e-003
tblVehicleEF	LDT1	8.8990e-003	0.07
tblVehicleEF	LDT1	1.05	0.87
tblVehicleEF	LDT1	1.76	2.34
tblVehicleEF	LDT1	313.61	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.11	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02

tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	3.1480e-003	2.8000e-003
tblVehicleEF	LDT1	6.9900e-004	6.0000e-004
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.13	0.35
tblVehicleEF	LDT1	6.6770e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.87	0.87
tblVehicleEF	LDT1	2.76	2.34
tblVehicleEF	LDT1	284.11	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.10	0.07
tblVehicleEF	LDT1	0.14	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	2.8500e-003	2.8000e-003
tblVehicleEF	LDT1	7.1600e-004	6.0000e-004
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.19	0.35
tblVehicleEF	LDT2	4.4150e-003	2.9000e-003
tblVehicleEF	LDT2	5.8360e-003	0.06
tblVehicleEF	LDT2	0.62	0.70
tblVehicleEF	LDT2	1.34	2.74
tblVehicleEF	LDT2	323.78	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003

tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	3.2420e-003	3.0000e-003
tblVehicleEF	LDT2	7.6900e-004	7.0000e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.0080e-003	2.9000e-003
tblVehicleEF	LDT2	4.7080e-003	0.06
tblVehicleEF	LDT2	0.75	0.70
tblVehicleEF	LDT2	1.03	2.74
tblVehicleEF	LDT2	353.38	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.08	0.26
tblVehicleEF	LDT2	0.04	0.04

tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	3.5390e-003	3.0000e-003
tblVehicleEF	LDT2	7.6400e-004	7.0000e-004
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.07	0.32
tblVehicleEF	LDT2	4.2820e-003	2.9000e-003
tblVehicleEF	LDT2	6.6640e-003	0.06
tblVehicleEF	LDT2	0.60	0.70
tblVehicleEF	LDT2	1.58	2.74
tblVehicleEF	LDT2	319.73	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.26

tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.2010e-003	3.0000e-003
tblVehicleEF	LDT2	7.7400e-004	7.0000e-004
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.99	0.77
tblVehicleEF	LHD1	2.29	0.99
tblVehicleEF	LHD1	9.15	9.11

tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.39	0.94
tblVehicleEF	LHD1	0.94	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4200e-004	1.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	1.01	0.77
tblVehicleEF	LHD1	2.10	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.33	0.94
tblVehicleEF	LHD1	0.87	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004

tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.3800e-004	1.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.16	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.24	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.98	0.77
tblVehicleEF	LHD1	2.47	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07

tblVehicleEF	LHD1	1.42	0.94
tblVehicleEF	LHD1	1.00	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4500e-004	1.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12

tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.0300e-003	6.9000e-003
tblVehicleEF	LHD2	5.6740e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	1.02	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.77	0.98
tblVehicleEF	LHD2	0.40	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4300e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.1180e-003	6.9000e-003
tblVehicleEF	LHD2	5.3450e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	0.94	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.74	0.98
tblVehicleEF	LHD2	0.38	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003

tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4200e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003

tblVehicleEF	LHD2	6.9590e-003	6.9000e-003
tblVehicleEF	LHD2	5.9550e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.55	0.64
tblVehicleEF	LHD2	1.09	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.78	0.98
tblVehicleEF	LHD2	0.42	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.08

tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	MCY	0.46	0.34
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.70	20.00
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75

tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.27	2.29
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	2.1230e-003	2.1000e-003
tblVehicleEF	MCY	6.8900e-004	6.0000e-004
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.81	2.82
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.43	2.15
tblVehicleEF	MCY	0.44	0.34
tblVehicleEF	MCY	0.13	0.26
tblVehicleEF	MCY	18.98	20.00
tblVehicleEF	MCY	8.86	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.29	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	2.59	0.89

tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.18	2.29
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.83	1.98
tblVehicleEF	MCY	2.1090e-003	2.1000e-003
tblVehicleEF	MCY	6.5400e-004	6.0000e-004
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.70	2.82
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.99	2.15
tblVehicleEF	MCY	0.47	0.34
tblVehicleEF	MCY	0.19	0.26
tblVehicleEF	MCY	21.47	20.00
tblVehicleEF	MCY	11.78	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.25	1.16
tblVehicleEF	MCY	0.35	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003

tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.37	2.29
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.62	1.98
tblVehicleEF	MCY	2.1550e-003	2.1000e-003
tblVehicleEF	MCY	7.2600e-004	6.0000e-004
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.94	2.82
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.85	2.15
tblVehicleEF	MDV	8.6020e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.97	0.82
tblVehicleEF	MDV	2.71	3.10
tblVehicleEF	MDV	443.89	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003

tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4430e-003	3.8000e-003
tblVehicleEF	MDV	1.0620e-003	8.0000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MDV	9.7400e-003	3.8000e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.18	0.82
tblVehicleEF	MDV	2.08	3.10
tblVehicleEF	MDV	483.31	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.21	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02

tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.16	0.38
tblVehicleEF	MDV	4.8400e-003	3.8000e-003
tblVehicleEF	MDV	1.0500e-003	8.0000e-004
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.18	0.42
tblVehicleEF	MDV	8.3570e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.96	0.82
tblVehicleEF	MDV	3.22	3.10
tblVehicleEF	MDV	438.49	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.26	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.23	0.38
tblVehicleEF	MDV	4.3890e-003	3.8000e-003
tblVehicleEF	MDV	1.0710e-003	8.0000e-004
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.25	0.42
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.46	0.85
tblVehicleEF	MH	4.96	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.34	1.52
tblVehicleEF	MH	0.78	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01

tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6600e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.52	0.85
tblVehicleEF	MH	4.45	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.26	1.52

tblVehicleEF	MH	0.72	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.27	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.41	0.85
tblVehicleEF	MH	5.39	1.96

tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.38	1.52
tblVehicleEF	MH	0.83	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7400e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MHD	0.02	4.0000e-003

tblVehicleEF	MHD	4.4400e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.37	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.47	1.19
tblVehicleEF	MHD	134.03	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.38	0.52
tblVehicleEF	MHD	1.11	1.47
tblVehicleEF	MHD	10.23	1.66
tblVehicleEF	MHD	1.4100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.3500e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	MHD	1.2910e-003	8.0000e-004

tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0200e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	0.01	4.0000e-003
tblVehicleEF	MHD	4.5430e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.43
tblVehicleEF	MHD	0.36	0.27
tblVehicleEF	MHD	4.98	1.19
tblVehicleEF	MHD	142.13	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.40	0.52
tblVehicleEF	MHD	1.07	1.47
tblVehicleEF	MHD	10.17	1.66
tblVehicleEF	MHD	1.1900e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.1400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06

tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.31	0.05
tblVehicleEF	MHD	1.3670e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9400e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.3600e-003	2.1000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.94	1.19
tblVehicleEF	MHD	123.22	84.01
tblVehicleEF	MHD	1,189.25	1,109.33

tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.37	0.52
tblVehicleEF	MHD	1.13	1.47
tblVehicleEF	MHD	10.28	1.66
tblVehicleEF	MHD	1.7100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.6400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.35	0.05
tblVehicleEF	MHD	1.1890e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1000e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.38	0.06

tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.3020e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.53	0.98
tblVehicleEF	OBUS	5.50	2.88
tblVehicleEF	OBUS	71.68	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.14	0.23
tblVehicleEF	OBUS	0.75	1.13
tblVehicleEF	OBUS	2.17	0.68
tblVehicleEF	OBUS	1.3000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.2000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.34	0.14

tblVehicleEF	OBUS	6.9600e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8700e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.37	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.5680e-003	9.0000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.55	0.98
tblVehicleEF	OBUS	4.94	2.88
tblVehicleEF	OBUS	74.94	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.15	0.23
tblVehicleEF	OBUS	0.71	1.13
tblVehicleEF	OBUS	2.10	0.68
tblVehicleEF	OBUS	1.1000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.0000e-005	1.0000e-004

tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.32	0.14
tblVehicleEF	OBUS	7.2700e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7700e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.35	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.0920e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.50
tblVehicleEF	OBUS	0.52	0.98
tblVehicleEF	OBUS	5.95	2.88
tblVehicleEF	OBUS	67.19	65.66

tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.13	0.23
tblVehicleEF	OBUS	0.77	1.13
tblVehicleEF	OBUS	2.23	0.68
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	6.5300e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9500e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004

tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.39	0.15
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1030e-003	2.6000e-003
tblVehicleEF	SBUS	0.06	1.3000e-003
tblVehicleEF	SBUS	2.09	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.33	0.19
tblVehicleEF	SBUS	1,440.18	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.22	2.23
tblVehicleEF	SBUS	4.78	2.75
tblVehicleEF	SBUS	19.18	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	2.0500e-004	0.00

tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2700e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	8.0000e-003
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1440e-003	2.6000e-003
tblVehicleEF	SBUS	0.05	1.3000e-003
tblVehicleEF	SBUS	1.93	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	0.91	0.19
tblVehicleEF	SBUS	1,522.68	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.64	2.23
tblVehicleEF	SBUS	4.59	2.75
tblVehicleEF	SBUS	19.17	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	9.5970e-003	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.24	0.09
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.05	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2100e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.33	0.12
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.06	8.0000e-003
tblVehicleEF	SBUS	0.88	0.02
tblVehicleEF	SBUS	6.0730e-003	2.6000e-003
tblVehicleEF	SBUS	0.07	1.3000e-003
tblVehicleEF	SBUS	2.33	1.26

tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.66	0.19
tblVehicleEF	SBUS	1,326.25	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	12.63	2.23
tblVehicleEF	SBUS	4.86	2.75
tblVehicleEF	SBUS	19.19	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.3300e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004

tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	8.0000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.07	1.5000e-003
tblVehicleEF	UBUS	4.04	8.13
tblVehicleEF	UBUS	11.74	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.66	0.64
tblVehicleEF	UBUS	12.20	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004

tblVehicleEF	UBUS	0.98	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7290e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.65	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	1.08	5.8000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.06	1.5000e-003
tblVehicleEF	UBUS	4.11	8.13
tblVehicleEF	UBUS	9.17	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.41	0.64
tblVehicleEF	UBUS	12.07	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004

tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.39	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.85	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.6840e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.66	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.93	5.8000e-003
tblVehicleEF	UBUS	0.23	1.10
tblVehicleEF	UBUS	0.08	1.5000e-003
tblVehicleEF	UBUS	4.00	8.13
tblVehicleEF	UBUS	14.08	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.77	0.64
tblVehicleEF	UBUS	12.31	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003

tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.10	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7700e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.64	1.12
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.20	5.8000e-003
tblVehicleTrips	CC_TTP	0.00	80.10
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.90
tblVehicleTrips	DV_TP	0.00	15.00
tblVehicleTrips	PB_TP	0.00	61.00
tblVehicleTrips	PR_TP	0.00	24.00
tblVehicleTrips	ST_TR	7.16	5.87
tblVehicleTrips	ST_TR	6.39	3.77
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	1.64	0.85
tblVehicleTrips	ST_TR	94.36	24.19
tblVehicleTrips	ST_TR	49.97	26.98

tblVehicleTrips	ST_TR	9.91	7.19
tblVehicleTrips	ST_TR	0.00	2.02
tblVehicleTrips	SU_TR	6.07	4.97
tblVehicleTrips	SU_TR	5.86	3.46
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	0.76	0.39
tblVehicleTrips	SU_TR	72.16	18.50
tblVehicleTrips	SU_TR	25.24	13.63
tblVehicleTrips	SU_TR	8.62	6.26
tblVehicleTrips	SU_TR	0.00	2.02
tblVehicleTrips	WD_TR	6.59	5.40
tblVehicleTrips	WD_TR	6.65	3.93
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	11.42	5.89
tblVehicleTrips	WD_TR	89.95	23.06
tblVehicleTrips	WD_TR	42.70	23.06
tblVehicleTrips	WD_TR	9.52	6.91
tblVehicleTrips	WD_TR	0.00	2.02
tblWater	IndoorWaterUseRate	41,437,960.30	44,044,121.32
tblWater	OutdoorWaterUseRate	26,123,931.49	27,766,946.05
tblWater	OutdoorWaterUseRate	38,997,184.57	0.00
tblWoodstoves	NumberCatalytic	12.72	0.00
tblWoodstoves	NumberCatalytic	7.00	0.00
tblWoodstoves	NumberCatalytic	10.96	0.00
tblWoodstoves	NumberNoncatalytic	12.72	0.00
tblWoodstoves	NumberNoncatalytic	7.00	0.00
tblWoodstoves	NumberNoncatalytic	10.96	0.00

tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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					
2021	1.1897	15.2976	8.3714	0.0257	1.7767	0.5223	2.2989	0.8594	0.4815	1.3409	0.0000	2,343.3497	2,343.3497	0.4720	0.0000	2,355.1498
2022	0.7651	8.5630	6.2163	0.0175	1.0620	0.3080	1.3700	0.4672	0.2836	0.7508	0.0000	1,568.7730	1,568.7730	0.3822	0.0000	1,578.3270
2023	12.0285	8.0721	9.0548	0.0377	2.3078	0.1613	2.4692	0.6505	0.1525	0.8030	0.0000	3,475.1143	3,475.1143	0.2045	0.0000	3,480.2257
2024	3.9457	6.8111	7.4952	0.0343	2.1344	0.1021	2.2365	0.5772	0.0963	0.6735	0.0000	3,171.5239	3,171.5239	0.1542	0.0000	3,175.3781
2025	0.8147	6.4407	6.8851	0.0329	2.0953	0.0843	2.1796	0.5668	0.0791	0.6459	0.0000	3,049.8291	3,049.8291	0.1476	0.0000	3,053.5197
2026	0.7839	6.3519	6.6073	0.0323	2.0953	0.0838	2.1792	0.5668	0.0787	0.6455	0.0000	2,995.1442	2,995.1442	0.1443	0.0000	2,998.7513
2027	0.7550	6.2653	6.3655	0.0318	2.0953	0.0832	2.1785	0.5668	0.0782	0.6449	0.0000	2,946.3349	2,946.3349	0.1413	0.0000	2,949.8664
2028	0.6650	5.6699	5.6395	0.0287	1.9187	0.0755	1.9942	0.5190	0.0709	0.5899	0.0000	2,659.1414	2,659.1414	0.1269	0.0000	2,662.3144
Maximum	**12.0285**	**15.2976**	**9.0548**	**0.0377**	**2.3078**	**0.5223**	**2.4692**	**0.8594**	**0.4815**	**1.3409**	**0.0000**	**3,475.1143**	**3,475.1143**	**0.4720**	**0.0000**	**3,480.2257**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4112	5.7552	8.5928	0.0257	0.9685	0.0940	1.0625	0.4322	0.0886	0.5208	0.0000	2,343.3481	2,343.3481	0.4720	0.0000	2,355.1482
2022	0.3529	3.5965	6.9478	0.0175	0.6570	0.1001	0.7571	0.2565	0.0935	0.3500	0.0000	1,568.7716	1,568.7716	0.3822	0.0000	1,578.3257
2023	11.7639	5.5477	9.3488	0.0377	2.2536	0.0305	2.2841	0.6210	0.0289	0.6500	0.0000	3,475.1137	3,475.1137	0.2045	0.0000	3,480.2251
2024	3.7814	5.2381	7.6667	0.0343	2.1344	0.0217	2.1560	0.5772	0.0206	0.5978	0.0000	3,171.5236	3,171.5236	0.1542	0.0000	3,175.3777
2025	0.6791	5.1051	7.0646	0.0329	2.0953	0.0207	2.1160	0.5668	0.0197	0.5864	0.0000	3,049.8288	3,049.8288	0.1476	0.0000	3,053.5194
2026	0.6483	5.0163	6.7868	0.0323	2.0953	0.0203	2.1156	0.5668	0.0193	0.5861	0.0000	2,995.1438	2,995.1438	0.1443	0.0000	2,998.7510
2027	0.6193	4.9296	6.5450	0.0318	2.0953	0.0197	2.1150	0.5668	0.0187	0.5855	0.0000	2,946.3345	2,946.3345	0.1413	0.0000	2,949.8660
2028	0.5408	4.4468	5.8039	0.0287	1.9187	0.0173	1.9360	0.5190	0.0165	0.5355	0.0000	2,659.1411	2,659.1411	0.1269	0.0000	2,662.3140
Maximum	**11.7639**	**5.7552**	**9.3488**	**0.0377**	**2.2536**	**0.1001**	**2.2841**	**0.6210**	**0.0935**	**0.6500**	**0.0000**	**3,475.1137**	**3,475.1137**	**0.4720**	**0.0000**	**3,480.2251**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.27**	**37.55**	**-3.75**	**0.00**	**8.18**	**77.17**	**13.98**	**13.98**	**76.85**	**27.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	3.5176	0.7996
2	**5-1-2021**	**7-31-2021**	5.5816	2.0330

3	**8-1-2021**	**10-31-2021**	4.3649	1.9622
4	**11-1-2021**	**1-31-2022**	4.7851	2.1799
5	**2-1-2022**	**4-30-2022**	4.6377	2.0343
6	**5-1-2022**	**7-31-2022**	1.6424	0.6210
7	**8-1-2022**	**10-31-2022**	1.4012	0.3798
8	**11-1-2022**	**1-31-2023**	2.2586	1.0829
9	**2-1-2023**	**4-30-2023**	2.3068	1.5978
10	**5-1-2023**	**7-31-2023**	1.9569	1.5168
11	**8-1-2023**	**10-31-2023**	7.8004	7.1274
12	**11-1-2023**	**1-31-2024**	10.7532	9.9818
13	**2-1-2024**	**4-30-2024**	1.9604	1.5598
14	**5-1-2024**	**7-31-2024**	1.8879	1.4820
15	**8-1-2024**	**10-31-2024**	1.8973	1.4914
16	**11-1-2024**	**1-31-2025**	1.8924	1.4984
17	**2-1-2025**	**4-30-2025**	1.7775	1.4191
18	**5-1-2025**	**7-31-2025**	1.8201	1.4497
19	**8-1-2025**	**10-31-2025**	1.8289	1.4585
20	**11-1-2025**	**1-31-2026**	1.8356	1.4652
21	**2-1-2026**	**4-30-2026**	1.7477	1.3893
22	**5-1-2026**	**7-31-2026**	1.7903	1.4198
23	**8-1-2026**	**10-31-2026**	1.7986	1.4281
24	**11-1-2026**	**1-31-2027**	1.8047	1.4342
25	**2-1-2027**	**4-30-2027**	1.7189	1.3605
26	**5-1-2027**	**7-31-2027**	1.7615	1.3910
27	**8-1-2027**	**10-31-2027**	1.7693	1.3988
28	**11-1-2027**	**1-31-2028**	1.7756	1.4051
29	**2-1-2028**	**4-30-2028**	1.7124	1.3500

30	**5-1-2028**	**7-31-2028**	1.7359	1.3655
31	**8-1-2028**	**9-30-2028**	1.1510	0.9054
		Highest	10.7532	9.9818

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.3949	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	3,363.1534	3,363.1534	0.1957	0.0591	3,385.6487
Mobile	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	284.5893	0.0000	284.5893	16.8187	0.0000	705.0579
Water						0.0000	0.0000		0.0000	0.0000	62.3469	166.6969	229.0438	6.4258	0.1539	435.5457
Total	**10.4703**	**8.0719**	**31.1183**	**0.1015**	**5.0847**	**0.2379**	**5.3226**	**1.4442**	**0.2333**	**1.6775**	**346.9362**	**11,854.4116**	**12,201.3478**	**23.8149**	**0.2157**	**12,860.9980**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.1214	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	3,355.6764	3,355.6764	0.1947	0.0590	3,378.1111
Mobile	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	142.2946	0.0000	142.2946	8.4094	0.0000	352.5289
Water						0.0000	0.0000		0.0000	0.0000	49.8775	123.9971	173.8746	5.1394	0.1230	339.0002
Total	**9.1969**	**8.0719**	**31.1183**	**0.1015**	**5.0847**	**0.2379**	**5.3226**	**1.4442**	**0.2333**	**1.6775**	**192.1722**	**11,804.2348**	**11,996.4070**	**14.1181**	**0.1847**	**12,404.3859**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**44.61**	**0.42**	**1.68**	**40.72**	**14.39**	**3.55**

3.0 Construction Detail

Construction Phase

Point Molate - Commercial Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2021	5/19/2021	5	78	
2	Site Preparation	Site Preparation	3/1/2021	7/1/2021	5	89	
3	Grading	Grading	4/1/2021	3/31/2022	5	261	
4	Paving	Paving	1/1/2022	6/24/2022	5	125	
5	Bay Trail Grading	Grading	3/1/2022	3/1/2023	5	262	
6	Building Construction	Building Construction	12/23/2022	11/30/2028	5	1550	
7	Architectural Coating	Architectural Coating	9/1/2023	2/1/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 3,076,380; Residential Outdoor: 1,025,460; Non-Residential Indoor: 944,355; Non-Residential Outdoor: 314,785; Striped Parking Area: 2,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Bay Trail Grading	Excavators	1	6.00	158	0.38
Bay Trail Grading	Graders	1	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	1	8.00	367	0.48
Bay Trail Grading	Paving Equipment	1	8.00	132	0.36
Bay Trail Grading	Plate Compactors	1	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	1	6.00	247	0.40
Bay Trail Grading	Scrapers	2	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	8	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
Demolition	6	15.00	0.00	227.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	34,067.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	9	23.00	0.00	1,033.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,628.00	478.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	326.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0246	0.0000	0.0246	3.7300e-003	0.0000	3.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1234	1.2262	0.8410	1.5100e-003		0.0605	0.0605		0.0562	0.0562	0.0000	132.6031	132.6031	0.0373	0.0000	133.5361
Total	**0.1234**	**1.2262**	**0.8410**	**1.5100e-003**	**0.0246**	**0.0605**	**0.0851**	**3.7300e-003**	**0.0562**	**0.0599**	**0.0000**	**132.6031**	**132.6031**	**0.0373**	**0.0000**	**133.5361**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	1.6800e-003	0.0000	1.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0180	0.0781	0.9079	1.5100e-003		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	132.6029	132.6029	0.0373	0.0000	133.5360
Total	**0.0180**	**0.0781**	**0.9079**	**1.5100e-003**	**0.0111**	**2.4000e-003**	**0.0135**	**1.6800e-003**	**2.4000e-003**	**4.0800e-003**	**0.0000**	**132.6029**	**132.6029**	**0.0373**	**0.0000**	**133.5360**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

3.3 Site Preparation - 2021

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					0.8040	0.0000	0.8040	0.4419	0.0000	0.4419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1730	1.8021	0.9414	1.6900e-003		0.0910	0.0910		0.0837	0.0837	0.0000	148.7889	148.7889	0.0481	0.0000	149.9920
Total	**0.1730**	**1.8021**	**0.9414**	**1.6900e-003**	**0.8040**	**0.0910**	**0.8949**	**0.4419**	**0.0837**	**0.5256**	**0.0000**	**148.7889**	**148.7889**	**0.0481**	**0.0000**	**149.9920**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3618	0.0000	0.3618	0.1989	0.0000	0.1989	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.0898	0.9287	1.6900e-003		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	148.7888	148.7888	0.0481	0.0000	149.9918
Total	**0.0207**	**0.0898**	**0.9287**	**1.6900e-003**	**0.3618**	**2.7600e-003**	**0.3645**	**0.1989**	**2.7600e-003**	**0.2016**	**0.0000**	**148.7888**	**148.7888**	**0.0481**	**0.0000**	**149.9918**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

3.4 Grading - 2021

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					0.6409	0.0000	0.6409	0.3312	0.0000	0.3312	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7790	8.7873	5.8014	0.0121		0.3596	0.3596		0.3308	0.3308	0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347
Total	**0.7790**	**8.7873**	**5.8014**	**0.0121**	**0.6409**	**0.3596**	**1.0005**	**0.3312**	**0.3308**	**0.6621**	**0.0000**	**1,061.4523**	**1,061.4523**	**0.3433**	**0.0000**	**1,070.0347**

3.4 Grading - 2021

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	0.0999	3.4422	0.6822	9.9800e-003	0.2709	0.0109	0.2817	0.0729	0.0104	0.0833	0.0000	962.8716	962.8716	0.0422	0.0000	963.9273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1090**	**3.4486**	**0.7499**	**0.0102**	**0.2943**	**0.0110**	**0.3053**	**0.0791**	**0.0105**	**0.0897**	**0.0000**	**982.7033**	**982.7033**	**0.0427**	**0.0000**	**983.7703**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2884	0.0000	0.2884	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.1053	5.9685	0.0121		0.0776	0.0776		0.0727	0.0727	0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334
Total	**0.2582**	**2.1053**	**5.9685**	**0.0121**	**0.2884**	**0.0776**	**0.3660**	**0.1490**	**0.0727**	**0.2218**	**0.0000**	**1,061.4511**	**1,061.4511**	**0.3433**	**0.0000**	**1,070.0334**

3.4 Grading - 2021

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	0.0999	3.4422	0.6822	9.9800e-003	0.2709	0.0109	0.2817	0.0729	0.0104	0.0833	0.0000	962.8716	962.8716	0.0422	0.0000	963.9273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1090**	**3.4486**	**0.7499**	**0.0102**	**0.2943**	**0.0110**	**0.3053**	**0.0791**	**0.0105**	**0.0897**	**0.0000**	**982.7033**	**982.7033**	**0.0427**	**0.0000**	**983.7703**

3.4 Grading - 2022

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					0.2404	0.0000	0.2404	0.1111	0.0000	0.1111	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2209	2.3878	1.7454	3.9300e-003		0.0970	0.0970		0.0892	0.0892	0.0000	345.2407	345.2407	0.1117	0.0000	348.0322
Total	**0.2209**	**2.3878**	**1.7454**	**3.9300e-003**	**0.2404**	**0.0970**	**0.3374**	**0.1111**	**0.0892**	**0.2003**	**0.0000**	**345.2407**	**345.2407**	**0.1117**	**0.0000**	**348.0322**

3.4 Grading - 2022

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	0.0306	1.0254	0.2175	3.2000e-003	0.2340	3.0100e-003	0.2370	0.0595	2.8800e-003	0.0624	0.0000	308.6316	308.6316	0.0133	0.0000	308.9640
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0333**	**1.0273**	**0.2377**	**3.2700e-003**	**0.2416**	**3.0600e-003**	**0.2447**	**0.0615**	**2.9200e-003**	**0.0645**	**0.0000**	**314.8352**	**314.8352**	**0.0134**	**0.0000**	**315.1708**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1082	0.0000	0.1082	0.0500	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0786	0.5995	1.9088	3.9300e-003		0.0220	0.0220		0.0207	0.0207	0.0000	345.2403	345.2403	0.1117	0.0000	348.0318
Total	**0.0786**	**0.5995**	**1.9088**	**3.9300e-003**	**0.1082**	**0.0220**	**0.1302**	**0.0500**	**0.0207**	**0.0706**	**0.0000**	**345.2403**	**345.2403**	**0.1117**	**0.0000**	**348.0318**

3.4 Grading - 2022

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	0.0306	1.0254	0.2175	3.2000e-003	0.2340	3.0100e-003	0.2370	0.0595	2.8800e-003	0.0624	0.0000	308.6316	308.6316	0.0133	0.0000	308.9640
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0333**	**1.0273**	**0.2377**	**3.2700e-003**	**0.2416**	**3.0600e-003**	**0.2447**	**0.0615**	**2.9200e-003**	**0.0645**	**0.0000**	**314.8352**	**314.8352**	**0.0134**	**0.0000**	**315.1708**

3.5 Paving - 2022

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1722	125.1722	0.0405	0.0000	126.1843
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1722**	**125.1722**	**0.0405**	**0.0000**	**126.1843**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1721	125.1721	0.0405	0.0000	126.1842
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1721**	**125.1721**	**0.0405**	**0.0000**	**126.1842**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

3.6 Bay Trail Grading - 2022

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					0.4960	0.0000	0.4960	0.2720	0.0000	0.2720	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4053	4.1437	3.0396	7.4600e-003		0.1689	0.1689		0.1555	0.1555	0.0000	654.0597	654.0597	0.2108	0.0000	659.3293
Total	**0.4053**	**4.1437**	**3.0396**	**7.4600e-003**	**0.4960**	**0.1689**	**0.6650**	**0.2720**	**0.1555**	**0.4275**	**0.0000**	**654.0597**	**654.0597**	**0.2108**	**0.0000**	**659.3293**

3.6 Bay Trail Grading - 2022

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	3.1600e-003	0.1060	0.0225	3.3000e-004	8.3900e-003	3.1000e-004	8.7000e-003	2.2800e-003	3.0000e-004	2.5700e-003	0.0000	31.9014	31.9014	1.3700e-003	0.0000	31.9358
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0104**	**0.1109**	**0.0755**	**5.1000e-004**	**0.0284**	**4.4000e-004**	**0.0288**	**7.5900e-003**	**4.2000e-004**	**8.0000e-003**	**0.0000**	**48.1761**	**48.1761**	**1.7100e-003**	**0.0000**	**48.2191**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2232	0.0000	0.2232	0.1224	0.0000	0.1224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1395	1.0055	3.6043	7.4600e-003		0.0384	0.0384		0.0361	0.0361	0.0000	654.0590	654.0590	0.2108	0.0000	659.3286
Total	**0.1395**	**1.0055**	**3.6043**	**7.4600e-003**	**0.2232**	**0.0384**	**0.2616**	**0.1224**	**0.0361**	**0.1585**	**0.0000**	**654.0590**	**654.0590**	**0.2108**	**0.0000**	**659.3286**

3.6 Bay Trail Grading - 2022

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	3.1600e-003	0.1060	0.0225	3.3000e-004	8.3900e-003	3.1000e-004	8.7000e-003	2.2800e-003	3.0000e-004	2.5700e-003	0.0000	31.9014	31.9014	1.3700e-003	0.0000	31.9358
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0104**	**0.1109**	**0.0755**	**5.1000e-004**	**0.0284**	**4.4000e-004**	**0.0288**	**7.5900e-003**	**4.2000e-004**	**8.0000e-003**	**0.0000**	**48.1761**	**48.1761**	**1.7100e-003**	**0.0000**	**48.2191**

3.6 Bay Trail Grading - 2023

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					0.0986	0.0000	0.0986	0.0535	0.0000	0.0535	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0740	0.7283	0.5768	1.4700e-003		0.0293	0.0293		0.0270	0.0270	0.0000	128.4369	128.4369	0.0414	0.0000	129.4717
Total	**0.0740**	**0.7283**	**0.5768**	**1.4700e-003**	**0.0986**	**0.0293**	**0.1279**	**0.0535**	**0.0270**	**0.0805**	**0.0000**	**128.4369**	**128.4369**	**0.0414**	**0.0000**	**129.4717**

3.6 Bay Trail Grading - 2023

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	4.2000e-004	0.0137	3.9800e-003	6.0000e-005	6.9200e-003	3.0000e-005	6.9400e-003	1.7400e-003	2.0000e-005	1.7600e-003	0.0000	6.0251	6.0251	2.3000e-004	0.0000	6.0310
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.7500e-003**	**0.0146**	**0.0136**	**9.0000e-005**	**0.0108**	**5.0000e-005**	**0.0109**	**2.7800e-003**	**4.0000e-005**	**2.8300e-003**	**0.0000**	**9.0965**	**9.0965**	**2.9000e-004**	**0.0000**	**9.1039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0444	0.0000	0.0444	0.0241	0.0000	0.0241	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.1874	0.7054	1.4700e-003		7.1300e-003	7.1300e-003		6.7200e-003	6.7200e-003	0.0000	128.4368	128.4368	0.0414	0.0000	129.4716
Total	**0.0269**	**0.1874**	**0.7054**	**1.4700e-003**	**0.0444**	**7.1300e-003**	**0.0515**	**0.0241**	**6.7200e-003**	**0.0308**	**0.0000**	**128.4368**	**128.4368**	**0.0414**	**0.0000**	**129.4716**

3.6 Bay Trail Grading - 2023

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	4.2000e-004	0.0137	3.9800e-003	6.0000e-005	6.9200e-003	3.0000e-005	6.9400e-003	1.7400e-003	2.0000e-005	1.7600e-003	0.0000	6.0251	6.0251	2.3000e-004	0.0000	6.0310
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.7500e-003**	**0.0146**	**0.0136**	**9.0000e-005**	**0.0108**	**5.0000e-005**	**0.0109**	**2.7800e-003**	**4.0000e-005**	**2.8300e-003**	**0.0000**	**9.0965**	**9.0965**	**2.9000e-004**	**0.0000**	**9.1039**

3.7 Building Construction - 2022

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	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.3800e-003	0.1400	0.0353	3.8000e-004	9.4300e-003	2.9000e-004	9.7200e-003	2.7300e-003	2.8000e-004	3.0000e-003	0.0000	36.7183	36.7183	1.6300e-003	0.0000	36.7591
Worker	0.0141	9.4800e-003	0.1028	3.5000e-004	0.0387	2.5000e-004	0.0390	0.0103	2.3000e-004	0.0105	0.0000	31.5607	31.5607	6.7000e-004	0.0000	31.5774
Total	**0.0184**	**0.1495**	**0.1381**	**7.3000e-004**	**0.0482**	**5.4000e-004**	**0.0487**	**0.0130**	**5.1000e-004**	**0.0135**	**0.0000**	**68.2790**	**68.2790**	**2.3000e-003**	**0.0000**	**68.3365**

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	9.8000e-004	6.7000e-003	0.0524	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**9.8000e-004**	**6.7000e-003**	**0.0524**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.3800e-003	0.1400	0.0353	3.8000e-004	9.4300e-003	2.9000e-004	9.7200e-003	2.7300e-003	2.8000e-004	3.0000e-003	0.0000	36.7183	36.7183	1.6300e-003	0.0000	36.7591
Worker	0.0141	9.4800e-003	0.1028	3.5000e-004	0.0387	2.5000e-004	0.0390	0.0103	2.3000e-004	0.0105	0.0000	31.5607	31.5607	6.7000e-004	0.0000	31.5774
Total	**0.0184**	**0.1495**	**0.1381**	**7.3000e-004**	**0.0482**	**5.4000e-004**	**0.0487**	**0.0130**	**5.1000e-004**	**0.0135**	**0.0000**	**68.2790**	**68.2790**	**2.3000e-003**	**0.0000**	**68.3365**

3.7 Building Construction - 2023

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.7 Building Construction - 2023

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	0.1431	4.6177	1.3639	0.0162	0.4087	5.5100e-003	0.4142	0.1182	5.2700e-003	0.1234	0.0000	1,546.8359	1,546.8359	0.0582	0.0000	1,548.2905
Worker	0.5676	0.3688	4.0946	0.0145	1.6786	0.0104	1.6890	0.4464	9.6000e-003	0.4560	0.0000	1,314.5008	1,314.5008	0.0259	0.0000	1,315.1489
Total	**0.7107**	**4.9865**	**5.4585**	**0.0307**	**2.0873**	**0.0159**	**2.1032**	**0.5646**	**0.0149**	**0.5795**	**0.0000**	**2,861.3367**	**2,861.3367**	**0.0841**	**0.0000**	**2,863.4395**

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	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.7 Building Construction - 2023

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	0.1431	4.6177	1.3639	0.0162	0.4087	5.5100e-003	0.4142	0.1182	5.2700e-003	0.1234	0.0000	1,546.8359	1,546.8359	0.0582	0.0000	1,548.2905
Worker	0.5676	0.3688	4.0946	0.0145	1.6786	0.0104	1.6890	0.4464	9.6000e-003	0.4560	0.0000	1,314.5008	1,314.5008	0.0259	0.0000	1,315.1489
Total	**0.7107**	**4.9865**	**5.4585**	**0.0307**	**2.0873**	**0.0159**	**2.1032**	**0.5646**	**0.0149**	**0.5795**	**0.0000**	**2,861.3367**	**2,861.3367**	**0.0841**	**0.0000**	**2,863.4395**

3.7 Building Construction - 2024

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.7 Building Construction - 2024

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	0.1393	4.5917	1.3179	0.0162	0.4119	5.4400e-003	0.4173	0.1191	5.2000e-003	0.1243	0.0000	1,548.5528	1,548.5528	0.0571	0.0000	1,549.9791
Worker	0.5352	0.3351	3.8156	0.0141	1.6915	0.0103	1.7018	0.4499	9.4800e-003	0.4593	0.0000	1,271.4159	1,271.4159	0.0235	0.0000	1,272.0029
Total	**0.6744**	**4.9268**	**5.1336**	**0.0302**	**2.1033**	**0.0157**	**2.1191**	**0.5689**	**0.0147**	**0.5836**	**0.0000**	**2,819.9687**	**2,819.9687**	**0.0805**	**0.0000**	**2,821.9820**

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	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0429**	**0.2928**	**2.2873**	**3.5300e-003**		**5.3400e-003**	**5.3400e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.7 Building Construction - 2024

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	0.1393	4.5917	1.3179	0.0162	0.4119	5.4400e-003	0.4173	0.1191	5.2000e-003	0.1243	0.0000	1,548.5528	1,548.5528	0.0571	0.0000	1,549.9791
Worker	0.5352	0.3351	3.8156	0.0141	1.6915	0.0103	1.7018	0.4499	9.4800e-003	0.4593	0.0000	1,271.4159	1,271.4159	0.0235	0.0000	1,272.0029
Total	**0.6744**	**4.9268**	**5.1336**	**0.0302**	**2.1033**	**0.0157**	**2.1191**	**0.5689**	**0.0147**	**0.5836**	**0.0000**	**2,819.9687**	**2,819.9687**	**0.0805**	**0.0000**	**2,821.9820**

3.7 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2025

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	0.1346	4.5106	1.2702	0.0160	0.4103	5.3000e-003	0.4156	0.1186	5.0600e-003	0.1237	0.0000	1,532.8798	1,532.8798	0.0553	0.0000	1,534.2628
Worker	0.5017	0.3029	3.5158	0.0134	1.6850	0.0101	1.6951	0.4481	9.3000e-003	0.4574	0.0000	1,214.2945	1,214.2945	0.0212	0.0000	1,214.8235
Total	**0.6363**	**4.8135**	**4.7860**	**0.0294**	**2.0953**	**0.0154**	**2.1107**	**0.5668**	**0.0144**	**0.5811**	**0.0000**	**2,747.1742**	**2,747.1742**	**0.0765**	**0.0000**	**2,749.0862**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2025

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	0.1346	4.5106	1.2702	0.0160	0.4103	5.3000e-003	0.4156	0.1186	5.0600e-003	0.1237	0.0000	1,532.8798	1,532.8798	0.0553	0.0000	1,534.2628
Worker	0.5017	0.3029	3.5158	0.0134	1.6850	0.0101	1.6951	0.4481	9.3000e-003	0.4574	0.0000	1,214.2945	1,214.2945	0.0212	0.0000	1,214.8235
Total	**0.6363**	**4.8135**	**4.7860**	**0.0294**	**2.0953**	**0.0154**	**2.1107**	**0.5668**	**0.0144**	**0.5811**	**0.0000**	**2,747.1742**	**2,747.1742**	**0.0765**	**0.0000**	**2,749.0862**

3.7 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2026

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	0.1310	4.4479	1.2382	0.0159	0.4103	5.1700e-003	0.4155	0.1186	4.9400e-003	0.1236	0.0000	1,523.9971	1,523.9971	0.0539	0.0000	1,525.3448
Worker	0.4745	0.2767	3.2700	0.0129	1.6850	9.8100e-003	1.6948	0.4481	9.0300e-003	0.4572	0.0000	1,168.4922	1,168.4922	0.0192	0.0000	1,168.9730
Total	**0.6055**	**4.7246**	**4.5082**	**0.0288**	**2.0953**	**0.0150**	**2.1103**	**0.5668**	**0.0140**	**0.5807**	**0.0000**	**2,692.4893**	**2,692.4893**	**0.0731**	**0.0000**	**2,694.3178**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2026

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	0.1310	4.4479	1.2382	0.0159	0.4103	5.1700e-003	0.4155	0.1186	4.9400e-003	0.1236	0.0000	1,523.9971	1,523.9971	0.0539	0.0000	1,525.3448
Worker	0.4745	0.2767	3.2700	0.0129	1.6850	9.8100e-003	1.6948	0.4481	9.0300e-003	0.4572	0.0000	1,168.4922	1,168.4922	0.0192	0.0000	1,168.9730
Total	**0.6055**	**4.7246**	**4.5082**	**0.0288**	**2.0953**	**0.0150**	**2.1103**	**0.5668**	**0.0140**	**0.5807**	**0.0000**	**2,692.4893**	**2,692.4893**	**0.0731**	**0.0000**	**2,694.3178**

3.7 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2027

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	0.1280	4.3843	1.2126	0.0158	0.4103	5.0400e-003	0.4154	0.1186	4.8200e-003	0.1235	0.0000	1,515.6354	1,515.6354	0.0526	0.0000	1,516.9499
Worker	0.4486	0.2536	3.0539	0.0125	1.6850	9.3100e-003	1.6943	0.4481	8.5700e-003	0.4567	0.0000	1,128.0446	1,128.0446	0.0175	0.0000	1,128.4830
Total	**0.5765**	**4.6380**	**4.2665**	**0.0283**	**2.0953**	**0.0144**	**2.1097**	**0.5668**	**0.0134**	**0.5802**	**0.0000**	**2,643.6800**	**2,643.6800**	**0.0701**	**0.0000**	**2,645.4329**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2027

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	0.1280	4.3843	1.2126	0.0158	0.4103	5.0400e-003	0.4154	0.1186	4.8200e-003	0.1235	0.0000	1,515.6354	1,515.6354	0.0526	0.0000	1,516.9499
Worker	0.4486	0.2536	3.0539	0.0125	1.6850	9.3100e-003	1.6943	0.4481	8.5700e-003	0.4567	0.0000	1,128.0446	1,128.0446	0.0175	0.0000	1,128.4830
Total	**0.5765**	**4.6380**	**4.2665**	**0.0283**	**2.0953**	**0.0144**	**2.1097**	**0.5668**	**0.0134**	**0.5802**	**0.0000**	**2,643.6800**	**2,643.6800**	**0.0701**	**0.0000**	**2,645.4329**

3.7 Building Construction - 2028

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	0.1634	1.4901	1.9221	3.2200e-003		0.0630	0.0630		0.0593	0.0593	0.0000	277.1438	277.1438	0.0652	0.0000	278.7724
Total	**0.1634**	**1.4901**	**1.9221**	**3.2200e-003**		**0.0630**	**0.0630**		**0.0593**	**0.0593**	**0.0000**	**277.1438**	**277.1438**	**0.0652**	**0.0000**	**278.7724**

3.7 Building Construction - 2028

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	0.1149	3.9662	1.0940	0.0144	0.3758	4.5100e-003	0.3803	0.1086	4.3100e-003	0.1129	0.0000	1,381.5206	1,381.5206	0.0471	0.0000	1,382.6969
Worker	0.3867	0.2136	2.6234	0.0111	1.5430	7.9100e-003	1.5509	0.4104	7.2800e-003	0.4176	0.0000	1,000.4770	1,000.4770	0.0147	0.0000	1,000.8450
Total	**0.5016**	**4.1798**	**3.7174**	**0.0255**	**1.9187**	**0.0124**	**1.9311**	**0.5190**	**0.0116**	**0.5306**	**0.0000**	**2,381.9976**	**2,381.9976**	**0.0618**	**0.0000**	**2,383.5419**

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	0.0392	0.2671	2.0865	3.2200e-003		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	277.1434	277.1434	0.0652	0.0000	278.7721
Total	**0.0392**	**0.2671**	**2.0865**	**3.2200e-003**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**277.1434**	**277.1434**	**0.0652**	**0.0000**	**278.7721**

3.7 Building Construction - 2028

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	0.1149	3.9662	1.0940	0.0144	0.3758	4.5100e-003	0.3803	0.1086	4.3100e-003	0.1129	0.0000	1,381.5206	1,381.5206	0.0471	0.0000	1,382.6969
Worker	0.3867	0.2136	2.6234	0.0111	1.5430	7.9100e-003	1.5509	0.4104	7.2800e-003	0.4176	0.0000	1,000.4770	1,000.4770	0.0147	0.0000	1,000.8450
Total	**0.5016**	**4.1798**	**3.7174**	**0.0255**	**1.9187**	**0.0124**	**1.9311**	**0.5190**	**0.0116**	**0.5306**	**0.0000**	**2,381.9976**	**2,381.9976**	**0.0618**	**0.0000**	**2,383.5419**

3.8 Architectural Coating - 2023

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	10.9341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0659	0.4482	0.6230	1.0200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	87.8319	87.8319	5.2500e-003	0.0000	87.9633
Total	**11.0000**	**0.4482**	**0.6230**	**1.0200e-003**		**0.0244**	**0.0244**		**0.0244**	**0.0244**	**0.0000**	**87.8319**	**87.8319**	**5.2500e-003**	**0.0000**	**87.9633**

3.8 Architectural Coating - 2023

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	0.0376	0.0244	0.2712	9.6000e-004	0.1112	6.9000e-004	0.1119	0.0296	6.4000e-004	0.0302	0.0000	87.0661	87.0661	1.7200e-003	0.0000	87.1090
Total	**0.0376**	**0.0244**	**0.2712**	**9.6000e-004**	**0.1112**	**6.9000e-004**	**0.1119**	**0.0296**	**6.4000e-004**	**0.0302**	**0.0000**	**87.0661**	**87.0661**	**1.7200e-003**	**0.0000**	**87.1090**

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	10.9341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0443	0.6304	1.0200e-003		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632
Total	**10.9443**	**0.0443**	**0.6304**	**1.0200e-003**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**87.8318**	**87.8318**	**5.2500e-003**	**0.0000**	**87.9632**

3.8 Architectural Coating - 2023

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	0.0376	0.0244	0.2712	9.6000e-004	0.1112	6.9000e-004	0.1119	0.0296	6.4000e-004	0.0302	0.0000	87.0661	87.0661	1.7200e-003	0.0000	87.1090
Total	**0.0376**	**0.0244**	**0.2712**	**9.6000e-004**	**0.1112**	**6.9000e-004**	**0.1119**	**0.0296**	**6.4000e-004**	**0.0302**	**0.0000**	**87.0661**	**87.0661**	**1.7200e-003**	**0.0000**	**87.1090**

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1170	0.1738	2.9000e-004		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.0687**	**0.1170**	**0.1738**	**2.9000e-004**		**5.8500e-003**	**5.8500e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8200e-003	6.1500e-003	0.0700	2.6000e-004	0.0310	1.9000e-004	0.0312	8.2500e-003	1.7000e-004	8.4300e-003	0.0000	23.3217	23.3217	4.3000e-004	0.0000	23.3325
Total	**9.8200e-003**	**6.1500e-003**	**0.0700**	**2.6000e-004**	**0.0310**	**1.9000e-004**	**0.0312**	**8.2500e-003**	**1.7000e-004**	**8.4300e-003**	**0.0000**	**23.3217**	**23.3217**	**4.3000e-004**	**0.0000**	**23.3325**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1759	2.9000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.0542**	**0.0124**	**0.1759**	**2.9000e-004**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8200e-003	6.1500e-003	0.0700	2.6000e-004	0.0310	1.9000e-004	0.0312	8.2500e-003	1.7000e-004	8.4300e-003	0.0000	23.3217	23.3217	4.3000e-004	0.0000	23.3325
Total	**9.8200e-003**	**6.1500e-003**	**0.0700**	**2.6000e-004**	**0.0310**	**1.9000e-004**	**0.0312**	**8.2500e-003**	**1.7000e-004**	**8.4300e-003**	**0.0000**	**23.3217**	**23.3217**	**4.3000e-004**	**0.0000**	**23.3325**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Unmitigated	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,814.40	1,972.32	1669.92	4,194,986	4,194,986
Apartments Low Rise	1,620.00	1,761.00	1491.00	3,745,523	3,745,523
Apartments Mid Rise	1,375.50	1,319.50	1211.00	3,104,112	3,104,112
City Park	56.70	682.50	502.20	447,770	447,770
City Park	5.16	62.11	45.70	40,747	40,747
Convenience Market (24 Hour)	0.00	0.00	0.00		
Office Park	2,088.42	301.38	138.28	3,896,052	3,896,052
Office Park	1,354.70	195.50	89.70	2,527,264	2,527,264
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Single Family Housing	1,893.34	1,970.06	1715.24	4,339,422	4,339,422
Unenclosed Parking Structure	202.00	202.00	202.00	153,839	153,839
Total	11,332.62	9,489.77	7,707.64	23,766,173	23,766,173

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Unenclosed Parking Structure	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Apartments Mid Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
City Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Convenience Market (24 Hour)	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Office Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Quality Restaurant	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Regional Shopping Center	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Single Family Housing	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Unenclosed Parking Structure	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,148.0768	1,148.0768	0.1524	0.0185	1,157.3928
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,155.5539	1,155.5539	0.1534	0.0186	1,164.9305
NaturalGas Mitigated	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	2,207.5996	2,207.5996	0.0423	0.0405	2,220.7182
NaturalGas Unmitigated	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	2,207.5996	2,207.5996	0.0423	0.0405	2,220.7182

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.85494e+006	0.0316	0.2698	0.1148	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.4418	312.4418	5.9900e-003	5.7300e-003	314.2985
Apartments Low Rise	6.55753e+006	0.0354	0.3022	0.1286	1.9300e-003		0.0244	0.0244		0.0244	0.0244	0.0000	349.9348	349.9348	6.7100e-003	6.4200e-003	352.0143
Apartments Mid Rise	2.95491e+006	0.0159	0.1362	0.0579	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.6853	157.6853	3.0200e-003	2.8900e-003	158.6223
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Office Park	4.6828e+006	0.0253	0.2296	0.1928	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	249.8920	249.8920	4.7900e-003	4.5800e-003	251.3770
Office Park	7.21905e+006	0.0389	0.3539	0.2973	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.2357	385.2357	7.3800e-003	7.0600e-003	387.5250
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2231**	**1.9516**	**1.1439**	**0.0122**		**0.1541**	**0.1541**		**0.1541**	**0.1541**	**0.0000**	**2,207.5996**	**2,207.5996**	**0.0423**	**0.0405**	**2,220.7182**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.85494e+006	0.0316	0.2698	0.1148	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.4418	312.4418	5.9900e-003	5.7300e-003	314.2985
Apartments Low Rise	6.55753e+006	0.0354	0.3022	0.1286	1.9300e-003		0.0244	0.0244		0.0244	0.0244	0.0000	349.9348	349.9348	6.7100e-003	6.4200e-003	352.0143
Apartments Mid Rise	2.95491e+006	0.0159	0.1362	0.0579	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.6853	157.6853	3.0200e-003	2.8900e-003	158.6223
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Office Park	4.6828e+006	0.0253	0.2296	0.1928	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	249.8920	249.8920	4.7900e-003	4.5800e-003	251.3770
Office Park	7.21905e+006	0.0389	0.3539	0.2973	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.2357	385.2357	7.3800e-003	7.0600e-003	387.5250
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2231**	**1.9516**	**1.1439**	**0.0122**		**0.1541**	**0.1541**		**0.1541**	**0.1541**	**0.0000**	**2,207.5996**	**2,207.5996**	**0.0423**	**0.0405**	**2,220.7182**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.43682e+006	162.0011	0.0215	2.6100e-003	163.3156
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Office Park	3.1073e+006	350.3464	0.0465	5.6400e-003	353.1892
Office Park	4.79024e+006	540.0970	0.0717	8.6900e-003	544.4796
Quality Restaurant	294800	66.4771	8.8300e-003	1.0700e-003	67.0165
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**1,155.5539**	**0.1534**	**0.0186**	**1,164.9305**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.39967e+006	157.8118	0.0210	2.5400e-003	159.0924
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Office Park	3.1073e+006	350.3464	0.0465	5.6400e-003	353.1892
Office Park	4.79024e+006	540.0970	0.0717	8.6900e-003	544.4796
Quality Restaurant	280220	63.1893	8.3900e-003	1.0200e-003	63.7021
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**1,148.0768**	**0.1524**	**0.0185**	**1,157.3928**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.1214	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Unmitigated	7.3949	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.3985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.9812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**7.3949**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.9812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**6.1214**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	173.8746	5.1394	0.1230	339.0002
Unmitigated	229.0438	6.4258	0.1539	435.5457

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	44.0441 / 27.7669	51.8014	1.4402	0.0345	98.0863
Apartments Mid Rise	22.8039 / 14.3764	26.8203	0.7457	0.0179	50.7844
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.370363 / 0.226996	0.4330	0.0121	2.9000e-004	0.8222
Office Park	103.898 / 63.6793	121.4781	3.3973	0.0814	230.6560
Quality Restaurant	6.07067 / 0.38749	5.7825	0.1983	4.7300e-003	12.1510
Regional Shopping Center	1.48145 / 0.907986	1.7321	0.0484	1.1600e-003	3.2889
Single Family Housing	17.8522 / 11.2546	20.9964	0.5838	0.0140	39.7569
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**229.0438**	**6.4258**	**0.1539**	**435.5457**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.2353 / 16.6602	39.2496	1.1519	0.0276	76.2598
Apartments Mid Rise	18.2431 / 8.62583	20.3216	0.5964	0.0143	39.4836
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.29629 / 0.136198	0.3285	9.6900e-003	2.3000e-004	0.6397
Office Park	83.1183 / 38.2076	92.1566	2.7171	0.0650	179.4582
Quality Restaurant	4.85654 / 0.232494	4.5954	0.1587	3.7900e-003	9.6900
Regional Shopping Center	1.18516 / 0.544791	1.3140	0.0387	9.3000e-004	2.5588
Single Family Housing	14.2818 / 6.75279	15.9089	0.4669	0.0112	30.9100
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**173.8746**	**5.1394**	**0.1230**	**339.0002**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	142.2946	8.4094	0.0000	352.5289
Unmitigated	284.5893	16.8187	0.0000	705.0579

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	310.96	63.1221	3.7304	0.0000	156.3823
Apartments Mid Rise	161	32.6816	1.9314	0.0000	80.9671
City Park	2.81	0.5704	0.0337	0.0000	1.4132
Convenience Market (24 Hour)	15.03	3.0510	0.1803	0.0000	7.5586
Office Park	543.65	110.3560	6.5219	0.0000	273.4024
Quality Restaurant	18.25	3.7046	0.2189	0.0000	9.1780
Regional Shopping Center	21	4.2628	0.2519	0.0000	10.5609
Single Family Housing	329.28	66.8409	3.9502	0.0000	165.5954
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**284.5893**	**16.8187**	**0.0000**	**705.0579**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	155.48	31.5610	1.8652	0.0000	78.1911
Apartments Mid Rise	80.5	16.3408	0.9657	0.0000	40.4836
City Park	1.405	0.2852	0.0169	0.0000	0.7066
Convenience Market (24 Hour)	7.515	1.5255	0.0902	0.0000	3.7793
Office Park	271.825	55.1780	3.2609	0.0000	136.7012
Quality Restaurant	9.125	1.8523	0.1095	0.0000	4.5890
Regional Shopping Center	10.5	2.1314	0.1260	0.0000	5.2805
Single Family Housing	164.64	33.4204	1.9751	0.0000	82.7977
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**142.2946**	**8.4094**	**0.0000**	**352.5290**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	2	50	2682	0.73	Diesel
Emergency Generator	1	2	50	2682	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Total	**0.0324**	**0.1079**	**0.5611**	**1.0600e-003**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**102.1298**	**102.1298**	**0.0143**	**0.0000**	**102.4878**

11.0 Vegetation

Point Molate - Commercial Heavy - Full Build Out with Mitigation

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	354.57	1000sqft	4.27	354,570.00	0
Office Park	230.00	1000sqft	2.77	230,000.00	0
Unenclosed Parking Structure	100.00	Space	0.00	40,000.00	0
City Park	30.00	Acre	30.00	1,306,800.00	0
City Park	2.73	Acre	2.73	118,918.80	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Quality Restaurant	10.00	1000sqft	0.12	10,000.00	0
Apartments Low Rise	336.00	Dwelling Unit	11.03	336,000.00	961
Apartments Low Rise	300.00	Dwelling Unit	9.85	300,000.00	858
Apartments Mid Rise	350.00	Dwelling Unit	4.83	350,000.00	1001
Single Family Housing	274.00	Dwelling Unit	46.74	493,200.00	784
Convenience Market (24 Hour)	5.00	1000sqft	0.00	5,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0
Regional Shopping Center	10.00	1000sqft	0.12	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				

CO2 Intensity (lb/MWhr)	248.57	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project operational year = 2024. Updated electricity emission factors to incorporate RPS for 2024.

Land Use - CalEEMod acerage scaled to match project acerage of 80 acres for Residential, office, retail and restaurant.

Construction Phase - Construction duration is from 2/1/2021 to 11/30/2028 based on Suncal schedule. Total construction days match inputs provided by AES. Exact start and end dates are defined by CalEEMod and won't exactly match AES/SunCal inputs.

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment -

Off-road Equipment - Construction equipment list updated to match inputs provided by AES/developer.

Off-road Equipment -

Trips and VMT - CalEEMod default trip rates

Demolition - Input provided by AES/developer.

Grading - Total soil quantity exported is 355,000 cu yd. Grading area for bay trail development is 2.73 acres. Grading area for project is 90 acres.

Road Dust - Road Silt Loading set to 0.047 g/m2

Consumer Products - VOC emission factor for consumer products is the county specific VOC factor

Landscape Equipment - Total landscaping days set to zero

Energy Use - 2019 Title-24 energy reductions applied to energy intensity factors for non-historical buildings. Rooftop PV is required per 2019 T24 to match total lighting/electricity usage for Low-rise and Single Family units.

Area Mitigation - Assuming "super-compliant" VOC paint for indoor and outdoor coatings - EFs from SCAQMD Rule 1113.

Energy Mitigation - Applying energy efficient appliances to residential units and restaurant.

Water Mitigation - Applying low-flow faucets, toilets and showers for indoor water use, with default reduction percentages.

Waste Mitigation - Applying 50% solid waste reduction measure.

Table Name	Column Name	Default Value	New Value
tblApplianceMitigation	PercentImprovement	15.00	30.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	998,460.00	1,025,460.00

tblArchitecturalCoating	ConstArea_Residential_Interior	2,995,380.00	3,076,380.00
tblAreaCoating	Area_Residential_Exterior	998460	1025460
tblAreaCoating	Area_Residential_Interior	2995380	3076380
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	10
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Point Molate - Commercial Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	78.00
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	NumDays	310.00	262.00
tblConstructionPhase	NumDays	220.00	125.00
tblConstructionPhase	NumDays	120.00	89.00
tblConsumerProducts	ROG_EF	2.14E-05	1.55E-05
tblEnergyUse	LightingElect	810.36	0.00
tblEnergyUse	LightingElect	741.44	667.30
tblEnergyUse	LightingElect	4.88	5.88
tblEnergyUse	LightingElect	3.47	3.77
tblEnergyUse	LightingElect	5.34	5.61
tblEnergyUse	LightingElect	4.88	5.12
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	1.75	1.14
tblEnergyUse	NT24E	3,172.76	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	0.70	1.00

tblEnergyUse	NT24NG	1.17	1.00
tblEnergyUse	NT24NG	128.02	128.00
tblEnergyUse	NT24NG	0.70	1.00
tblEnergyUse	T24E	233.06	0.00
tblEnergyUse	T24E	426.45	383.81
tblEnergyUse	T24E	2.24	2.90
tblEnergyUse	T24E	4.27	4.93
tblEnergyUse	T24E	2.67	2.90
tblEnergyUse	T24E	2.24	2.45
tblEnergyUse	T24E	217.68	0.00
tblEnergyUse	T24NG	17,734.50	16,901.46
tblEnergyUse	T24NG	6,115.43	5,827.60
tblEnergyUse	T24NG	3.90	5.00
tblEnergyUse	T24NG	17.44	19.36
tblEnergyUse	T24NG	39.90	41.30
tblEnergyUse	T24NG	3.90	4.48
tblEnergyUse	T24NG	39,708.76	35,976.35
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	95.40	600.00
tblFireplaces	NumberGas	52.50	0.00
tblFireplaces	NumberGas	68.50	0.00

tblFireplaces	NumberNoFireplace	25.44	0.00
tblFireplaces	NumberNoFireplace	14.00	0.00
tblFireplaces	NumberNoFireplace	21.92	0.00
tblFireplaces	NumberWood	108.12	0.00
tblFireplaces	NumberWood	59.50	0.00
tblFireplaces	NumberWood	117.82	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06

tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003

tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004

tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	OBUS	1.6400e-003	8.5200e-004
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003

tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblGrading	AcresOfGrading	1,696.50	90.00
tblGrading	AcresOfGrading	622.25	2.73
tblGrading	MaterialExported	0.00	344,550.00
tblGrading	MaterialExported	0.00	10,450.00
tblLandUse	LotAcreage	5.28	2.77
tblLandUse	LotAcreage	8.14	4.27
tblLandUse	LotAcreage	0.90	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	18.75	9.85
tblLandUse	LotAcreage	21.00	11.03
tblLandUse	LotAcreage	9.21	4.83

tblLandUse	LotAcreage	88.96	46.74
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	0.23	0.12
tblLandUse	LotAcreage	0.23	0.12
tblOffRoadEquipment	HorsePower	402.00	367.00
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.033
tblProjectCharacteristics	CO2IntensityFactor	641.35	248.57
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblRoadDust	RoadSiltLoading	0.1	0.047
tblSolidWaste	SolidWasteGenerationRate	292.56	310.96
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004

tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblVehicleEF	HHD	0.41	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.58	6.28
tblVehicleEF	HHD	0.84	0.40
tblVehicleEF	HHD	2.87	5.3000e-003
tblVehicleEF	HHD	4,335.05	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.83	5.34
tblVehicleEF	HHD	1.90	2.66
tblVehicleEF	HHD	19.75	2.36
tblVehicleEF	HHD	7.9210e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	7.5790e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.41	0.42

tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3500e-004	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.39	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.15	6.28
tblVehicleEF	HHD	0.85	0.40
tblVehicleEF	HHD	2.61	5.3000e-003
tblVehicleEF	HHD	4,592.60	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	14.28	5.34
tblVehicleEF	HHD	1.83	2.66
tblVehicleEF	HHD	19.74	2.36
tblVehicleEF	HHD	6.6780e-003	2.6000e-003

tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	6.3890e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.39	0.42
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3100e-004	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.45	0.49
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.45	0.02

tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.17	6.28
tblVehicleEF	HHD	0.83	0.40
tblVehicleEF	HHD	3.11	5.3000e-003
tblVehicleEF	HHD	3,979.39	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.22	5.34
tblVehicleEF	HHD	1.93	2.66
tblVehicleEF	HHD	19.77	2.36
tblVehicleEF	HHD	9.6380e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	9.2210e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.8100e-004	0.00

tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3900e-004	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.51	0.49
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	LDA	3.2820e-003	1.8000e-003
tblVehicleEF	LDA	4.5120e-003	0.05
tblVehicleEF	LDA	0.48	0.52
tblVehicleEF	LDA	1.04	2.15
tblVehicleEF	LDA	229.87	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09

tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.2620e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3010e-003	2.4000e-003
tblVehicleEF	LDA	5.4600e-004	5.0000e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	3.7280e-003	1.8000e-003
tblVehicleEF	LDA	3.6390e-003	0.05
tblVehicleEF	LDA	0.58	0.52
tblVehicleEF	LDA	0.80	2.15
tblVehicleEF	LDA	251.31	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.07	0.04

tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	9.3650e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.21
tblVehicleEF	LDA	2.5170e-003	2.4000e-003
tblVehicleEF	LDA	5.4200e-004	5.0000e-004
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.23
tblVehicleEF	LDA	3.1830e-003	1.8000e-003
tblVehicleEF	LDA	5.1540e-003	0.05
tblVehicleEF	LDA	0.47	0.52
tblVehicleEF	LDA	1.24	2.15
tblVehicleEF	LDA	226.93	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003

tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	8.0170e-003	6.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.2720e-003	2.4000e-003
tblVehicleEF	LDA	5.4900e-004	5.0000e-004
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDT1	6.8390e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.88	0.87
tblVehicleEF	LDT1	2.31	2.34
tblVehicleEF	LDT1	287.67	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.13	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003

tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.15	0.32
tblVehicleEF	LDT1	2.8860e-003	2.8000e-003
tblVehicleEF	LDT1	7.0800e-004	6.0000e-004
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.16	0.35
tblVehicleEF	LDT1	7.6930e-003	3.8000e-003
tblVehicleEF	LDT1	8.8990e-003	0.07
tblVehicleEF	LDT1	1.05	0.87
tblVehicleEF	LDT1	1.76	2.34
tblVehicleEF	LDT1	313.61	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.11	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02

tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	3.1480e-003	2.8000e-003
tblVehicleEF	LDT1	6.9900e-004	6.0000e-004
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.13	0.35
tblVehicleEF	LDT1	6.6770e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.87	0.87
tblVehicleEF	LDT1	2.76	2.34
tblVehicleEF	LDT1	284.11	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.10	0.07
tblVehicleEF	LDT1	0.14	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	2.8500e-003	2.8000e-003
tblVehicleEF	LDT1	7.1600e-004	6.0000e-004
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.19	0.35
tblVehicleEF	LDT2	4.4150e-003	2.9000e-003
tblVehicleEF	LDT2	5.8360e-003	0.06
tblVehicleEF	LDT2	0.62	0.70
tblVehicleEF	LDT2	1.34	2.74
tblVehicleEF	LDT2	323.78	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003

tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	3.2420e-003	3.0000e-003
tblVehicleEF	LDT2	7.6900e-004	7.0000e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.0080e-003	2.9000e-003
tblVehicleEF	LDT2	4.7080e-003	0.06
tblVehicleEF	LDT2	0.75	0.70
tblVehicleEF	LDT2	1.03	2.74
tblVehicleEF	LDT2	353.38	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.08	0.26
tblVehicleEF	LDT2	0.04	0.04

tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	3.5390e-003	3.0000e-003
tblVehicleEF	LDT2	7.6400e-004	7.0000e-004
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.07	0.32
tblVehicleEF	LDT2	4.2820e-003	2.9000e-003
tblVehicleEF	LDT2	6.6640e-003	0.06
tblVehicleEF	LDT2	0.60	0.70
tblVehicleEF	LDT2	1.58	2.74
tblVehicleEF	LDT2	319.73	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.26

tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.2010e-003	3.0000e-003
tblVehicleEF	LDT2	7.7400e-004	7.0000e-004
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.99	0.77
tblVehicleEF	LHD1	2.29	0.99
tblVehicleEF	LHD1	9.15	9.11

tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.39	0.94
tblVehicleEF	LHD1	0.94	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4200e-004	1.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	1.01	0.77
tblVehicleEF	LHD1	2.10	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.33	0.94
tblVehicleEF	LHD1	0.87	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004

tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.3800e-004	1.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.16	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.24	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.98	0.77
tblVehicleEF	LHD1	2.47	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07

tblVehicleEF	LHD1	1.42	0.94
tblVehicleEF	LHD1	1.00	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4500e-004	1.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12

tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.0300e-003	6.9000e-003
tblVehicleEF	LHD2	5.6740e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	1.02	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.77	0.98
tblVehicleEF	LHD2	0.40	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4300e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.1180e-003	6.9000e-003
tblVehicleEF	LHD2	5.3450e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	0.94	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.74	0.98
tblVehicleEF	LHD2	0.38	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003

tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4200e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003

tblVehicleEF	LHD2	6.9590e-003	6.9000e-003
tblVehicleEF	LHD2	5.9550e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.55	0.64
tblVehicleEF	LHD2	1.09	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.78	0.98
tblVehicleEF	LHD2	0.42	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.08

tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	MCY	0.46	0.34
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.70	20.00
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75

tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.27	2.29
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	2.1230e-003	2.1000e-003
tblVehicleEF	MCY	6.8900e-004	6.0000e-004
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.81	2.82
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.43	2.15
tblVehicleEF	MCY	0.44	0.34
tblVehicleEF	MCY	0.13	0.26
tblVehicleEF	MCY	18.98	20.00
tblVehicleEF	MCY	8.86	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.29	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	2.59	0.89

tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.18	2.29
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.83	1.98
tblVehicleEF	MCY	2.1090e-003	2.1000e-003
tblVehicleEF	MCY	6.5400e-004	6.0000e-004
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.70	2.82
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.99	2.15
tblVehicleEF	MCY	0.47	0.34
tblVehicleEF	MCY	0.19	0.26
tblVehicleEF	MCY	21.47	20.00
tblVehicleEF	MCY	11.78	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.25	1.16
tblVehicleEF	MCY	0.35	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003

tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.37	2.29
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.62	1.98
tblVehicleEF	MCY	2.1550e-003	2.1000e-003
tblVehicleEF	MCY	7.2600e-004	6.0000e-004
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.94	2.82
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.85	2.15
tblVehicleEF	MDV	8.6020e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.97	0.82
tblVehicleEF	MDV	2.71	3.10
tblVehicleEF	MDV	443.89	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003

tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4430e-003	3.8000e-003
tblVehicleEF	MDV	1.0620e-003	8.0000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MDV	9.7400e-003	3.8000e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.18	0.82
tblVehicleEF	MDV	2.08	3.10
tblVehicleEF	MDV	483.31	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.21	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02

tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.16	0.38
tblVehicleEF	MDV	4.8400e-003	3.8000e-003
tblVehicleEF	MDV	1.0500e-003	8.0000e-004
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.18	0.42
tblVehicleEF	MDV	8.3570e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.96	0.82
tblVehicleEF	MDV	3.22	3.10
tblVehicleEF	MDV	438.49	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.26	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.23	0.38
tblVehicleEF	MDV	4.3890e-003	3.8000e-003
tblVehicleEF	MDV	1.0710e-003	8.0000e-004
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.25	0.42
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.46	0.85
tblVehicleEF	MH	4.96	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.34	1.52
tblVehicleEF	MH	0.78	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01

tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6600e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.52	0.85
tblVehicleEF	MH	4.45	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.26	1.52

tblVehicleEF	MH	0.72	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.27	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.41	0.85
tblVehicleEF	MH	5.39	1.96

tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.38	1.52
tblVehicleEF	MH	0.83	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7400e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MHD	0.02	4.0000e-003

tblVehicleEF	MHD	4.4400e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.37	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.47	1.19
tblVehicleEF	MHD	134.03	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.38	0.52
tblVehicleEF	MHD	1.11	1.47
tblVehicleEF	MHD	10.23	1.66
tblVehicleEF	MHD	1.4100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.3500e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	MHD	1.2910e-003	8.0000e-004

tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0200e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	0.01	4.0000e-003
tblVehicleEF	MHD	4.5430e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.43
tblVehicleEF	MHD	0.36	0.27
tblVehicleEF	MHD	4.98	1.19
tblVehicleEF	MHD	142.13	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.40	0.52
tblVehicleEF	MHD	1.07	1.47
tblVehicleEF	MHD	10.17	1.66
tblVehicleEF	MHD	1.1900e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.1400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06

tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.31	0.05
tblVehicleEF	MHD	1.3670e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9400e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.3600e-003	2.1000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.94	1.19
tblVehicleEF	MHD	123.22	84.01
tblVehicleEF	MHD	1,189.25	1,109.33

tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.37	0.52
tblVehicleEF	MHD	1.13	1.47
tblVehicleEF	MHD	10.28	1.66
tblVehicleEF	MHD	1.7100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.6400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.35	0.05
tblVehicleEF	MHD	1.1890e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1000e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.38	0.06

tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.3020e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.53	0.98
tblVehicleEF	OBUS	5.50	2.88
tblVehicleEF	OBUS	71.68	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.14	0.23
tblVehicleEF	OBUS	0.75	1.13
tblVehicleEF	OBUS	2.17	0.68
tblVehicleEF	OBUS	1.3000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.2000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.34	0.14

tblVehicleEF	OBUS	6.9600e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8700e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.37	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.5680e-003	9.0000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.55	0.98
tblVehicleEF	OBUS	4.94	2.88
tblVehicleEF	OBUS	74.94	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.15	0.23
tblVehicleEF	OBUS	0.71	1.13
tblVehicleEF	OBUS	2.10	0.68
tblVehicleEF	OBUS	1.1000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.0000e-005	1.0000e-004

tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.32	0.14
tblVehicleEF	OBUS	7.2700e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7700e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.35	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.0920e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.50
tblVehicleEF	OBUS	0.52	0.98
tblVehicleEF	OBUS	5.95	2.88
tblVehicleEF	OBUS	67.19	65.66

tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.13	0.23
tblVehicleEF	OBUS	0.77	1.13
tblVehicleEF	OBUS	2.23	0.68
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	6.5300e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9500e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004

tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.39	0.15
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1030e-003	2.6000e-003
tblVehicleEF	SBUS	0.06	1.3000e-003
tblVehicleEF	SBUS	2.09	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.33	0.19
tblVehicleEF	SBUS	1,440.18	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.22	2.23
tblVehicleEF	SBUS	4.78	2.75
tblVehicleEF	SBUS	19.18	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	2.0500e-004	0.00

tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2700e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	8.0000e-003
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1440e-003	2.6000e-003
tblVehicleEF	SBUS	0.05	1.3000e-003
tblVehicleEF	SBUS	1.93	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	0.91	0.19
tblVehicleEF	SBUS	1,522.68	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.64	2.23
tblVehicleEF	SBUS	4.59	2.75
tblVehicleEF	SBUS	19.17	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	9.5970e-003	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.24	0.09
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.05	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2100e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.33	0.12
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.06	8.0000e-003
tblVehicleEF	SBUS	0.88	0.02
tblVehicleEF	SBUS	6.0730e-003	2.6000e-003
tblVehicleEF	SBUS	0.07	1.3000e-003
tblVehicleEF	SBUS	2.33	1.26

tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.66	0.19
tblVehicleEF	SBUS	1,326.25	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	12.63	2.23
tblVehicleEF	SBUS	4.86	2.75
tblVehicleEF	SBUS	19.19	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.3300e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004

tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	8.0000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.07	1.5000e-003
tblVehicleEF	UBUS	4.04	8.13
tblVehicleEF	UBUS	11.74	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.66	0.64
tblVehicleEF	UBUS	12.20	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004

tblVehicleEF	UBUS	0.98	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7290e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.65	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	1.08	5.8000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.06	1.5000e-003
tblVehicleEF	UBUS	4.11	8.13
tblVehicleEF	UBUS	9.17	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.41	0.64
tblVehicleEF	UBUS	12.07	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004

tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.39	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.85	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.6840e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.66	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.93	5.8000e-003
tblVehicleEF	UBUS	0.23	1.10
tblVehicleEF	UBUS	0.08	1.5000e-003
tblVehicleEF	UBUS	4.00	8.13
tblVehicleEF	UBUS	14.08	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.77	0.64
tblVehicleEF	UBUS	12.31	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003

tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.10	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7700e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.64	1.12
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.20	5.8000e-003
tblVehicleTrips	CC_TTP	0.00	80.10
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	0.90
tblVehicleTrips	DV_TP	0.00	15.00
tblVehicleTrips	PB_TP	0.00	61.00
tblVehicleTrips	PR_TP	0.00	24.00
tblVehicleTrips	ST_TR	7.16	5.87
tblVehicleTrips	ST_TR	6.39	3.77
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	1.64	0.85
tblVehicleTrips	ST_TR	94.36	24.19
tblVehicleTrips	ST_TR	49.97	26.98

tblVehicleTrips	ST_TR	9.91	7.19
tblVehicleTrips	ST_TR	0.00	2.02
tblVehicleTrips	SU_TR	6.07	4.97
tblVehicleTrips	SU_TR	5.86	3.46
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	0.76	0.39
tblVehicleTrips	SU_TR	72.16	18.50
tblVehicleTrips	SU_TR	25.24	13.63
tblVehicleTrips	SU_TR	8.62	6.26
tblVehicleTrips	SU_TR	0.00	2.02
tblVehicleTrips	WD_TR	6.59	5.40
tblVehicleTrips	WD_TR	6.65	3.93
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	11.42	5.89
tblVehicleTrips	WD_TR	89.95	23.06
tblVehicleTrips	WD_TR	42.70	23.06
tblVehicleTrips	WD_TR	9.52	6.91
tblVehicleTrips	WD_TR	0.00	2.02
tblWater	IndoorWaterUseRate	41,437,960.30	44,044,121.32
tblWater	OutdoorWaterUseRate	26,123,931.49	27,766,946.05
tblWater	OutdoorWaterUseRate	38,997,184.57	0.00
tblWoodstoves	NumberCatalytic	12.72	0.00
tblWoodstoves	NumberCatalytic	7.00	0.00
tblWoodstoves	NumberCatalytic	10.96	0.00
tblWoodstoves	NumberNoncatalytic	12.72	0.00
tblWoodstoves	NumberNoncatalytic	7.00	0.00
tblWoodstoves	NumberNoncatalytic	10.96	0.00

tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveDayYear	21.06	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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					
2021	1.1897	15.2976	8.3714	0.0257	1.7767	0.5223	2.2989	0.8594	0.4815	1.3409	0.0000	2,343.3497	2,343.3497	0.4720	0.0000	2,355.1498
2022	0.7651	8.5630	6.2163	0.0175	1.0620	0.3080	1.3700	0.4672	0.2836	0.7508	0.0000	1,568.7730	1,568.7730	0.3822	0.0000	1,578.3270
2023	12.0285	8.0721	9.0548	0.0377	2.3078	0.1613	2.4692	0.6505	0.1525	0.8030	0.0000	3,475.1143	3,475.1143	0.2045	0.0000	3,480.2257
2024	3.9457	6.8111	7.4952	0.0343	2.1344	0.1021	2.2365	0.5772	0.0963	0.6735	0.0000	3,171.5239	3,171.5239	0.1542	0.0000	3,175.3781
2025	0.8147	6.4407	6.8851	0.0329	2.0953	0.0843	2.1796	0.5668	0.0791	0.6459	0.0000	3,049.8291	3,049.8291	0.1476	0.0000	3,053.5197
2026	0.7839	6.3519	6.6073	0.0323	2.0953	0.0838	2.1792	0.5668	0.0787	0.6455	0.0000	2,995.1442	2,995.1442	0.1443	0.0000	2,998.7513
2027	0.7550	6.2653	6.3655	0.0318	2.0953	0.0832	2.1785	0.5668	0.0782	0.6449	0.0000	2,946.3349	2,946.3349	0.1413	0.0000	2,949.8664
2028	0.6650	5.6699	5.6395	0.0287	1.9187	0.0755	1.9942	0.5190	0.0709	0.5899	0.0000	2,659.1414	2,659.1414	0.1269	0.0000	2,662.3144
Maximum	**12.0285**	**15.2976**	**9.0548**	**0.0377**	**2.3078**	**0.5223**	**2.4692**	**0.8594**	**0.4815**	**1.3409**	**0.0000**	**3,475.1143**	**3,475.1143**	**0.4720**	**0.0000**	**3,480.2257**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4112	5.7552	8.5928	0.0257	0.9685	0.0940	1.0625	0.4322	0.0886	0.5208	0.0000	2,343.3481	2,343.3481	0.4720	0.0000	2,355.1482
2022	0.3529	3.5965	6.9478	0.0175	0.6570	0.1001	0.7571	0.2565	0.0935	0.3500	0.0000	1,568.7716	1,568.7716	0.3822	0.0000	1,578.3257
2023	11.7639	5.5477	9.3488	0.0377	2.2536	0.0305	2.2841	0.6210	0.0289	0.6500	0.0000	3,475.1137	3,475.1137	0.2045	0.0000	3,480.2251
2024	3.7814	5.2381	7.6667	0.0343	2.1344	0.0217	2.1560	0.5772	0.0206	0.5978	0.0000	3,171.5236	3,171.5236	0.1542	0.0000	3,175.3777
2025	0.6791	5.1051	7.0646	0.0329	2.0953	0.0207	2.1160	0.5668	0.0197	0.5864	0.0000	3,049.8288	3,049.8288	0.1476	0.0000	3,053.5194
2026	0.6483	5.0163	6.7868	0.0323	2.0953	0.0203	2.1156	0.5668	0.0193	0.5861	0.0000	2,995.1438	2,995.1438	0.1443	0.0000	2,998.7510
2027	0.6193	4.9296	6.5450	0.0318	2.0953	0.0197	2.1150	0.5668	0.0187	0.5855	0.0000	2,946.3345	2,946.3345	0.1413	0.0000	2,949.8660
2028	0.5408	4.4468	5.8039	0.0287	1.9187	0.0173	1.9360	0.5190	0.0165	0.5355	0.0000	2,659.1411	2,659.1411	0.1269	0.0000	2,662.3140
Maximum	**11.7639**	**5.7552**	**9.3488**	**0.0377**	**2.2536**	**0.1001**	**2.2841**	**0.6210**	**0.0935**	**0.6500**	**0.0000**	**3,475.1137**	**3,475.1137**	**0.4720**	**0.0000**	**3,480.2251**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.27**	**37.55**	**-3.75**	**0.00**	**8.18**	**77.17**	**13.98**	**13.98**	**76.85**	**27.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2021**	**4-30-2021**	3.5176	0.7996
2	**5-1-2021**	**7-31-2021**	5.5816	2.0330

3	**8-1-2021**	**10-31-2021**	4.3649	1.9622
4	**11-1-2021**	**1-31-2022**	4.7851	2.1799
5	**2-1-2022**	**4-30-2022**	4.6377	2.0343
6	**5-1-2022**	**7-31-2022**	1.6424	0.6210
7	**8-1-2022**	**10-31-2022**	1.4012	0.3798
8	**11-1-2022**	**1-31-2023**	2.2586	1.0829
9	**2-1-2023**	**4-30-2023**	2.3068	1.5978
10	**5-1-2023**	**7-31-2023**	1.9569	1.5168
11	**8-1-2023**	**10-31-2023**	7.8004	7.1274
12	**11-1-2023**	**1-31-2024**	10.7532	9.9818
13	**2-1-2024**	**4-30-2024**	1.9604	1.5598
14	**5-1-2024**	**7-31-2024**	1.8879	1.4820
15	**8-1-2024**	**10-31-2024**	1.8973	1.4914
16	**11-1-2024**	**1-31-2025**	1.8924	1.4984
17	**2-1-2025**	**4-30-2025**	1.7775	1.4191
18	**5-1-2025**	**7-31-2025**	1.8201	1.4497
19	**8-1-2025**	**10-31-2025**	1.8289	1.4585
20	**11-1-2025**	**1-31-2026**	1.8356	1.4652
21	**2-1-2026**	**4-30-2026**	1.7477	1.3893
22	**5-1-2026**	**7-31-2026**	1.7903	1.4198
23	**8-1-2026**	**10-31-2026**	1.7986	1.4281
24	**11-1-2026**	**1-31-2027**	1.8047	1.4342
25	**2-1-2027**	**4-30-2027**	1.7189	1.3605
26	**5-1-2027**	**7-31-2027**	1.7615	1.3910
27	**8-1-2027**	**10-31-2027**	1.7693	1.3988
28	**11-1-2027**	**1-31-2028**	1.7756	1.4051
29	**2-1-2028**	**4-30-2028**	1.7124	1.3500

30	**5-1-2028**	**7-31-2028**	1.7359	1.3655
31	**8-1-2028**	**9-30-2028**	1.1510	0.9054
		Highest	10.7532	9.9818

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.3949	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	3,363.1534	3,363.1534	0.1957	0.0591	3,385.6487
Mobile	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	284.5893	0.0000	284.5893	16.8187	0.0000	705.0579
Water						0.0000	0.0000		0.0000	0.0000	62.3469	166.6969	229.0438	6.4258	0.1539	435.5457
Total	**10.4703**	**8.0719**	**31.1183**	**0.1015**	**5.0847**	**0.2379**	**5.3226**	**1.4442**	**0.2333**	**1.6775**	**346.9362**	**11,854.4116**	**12,201.3478**	**23.8149**	**0.2157**	**12,860.9980**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.1214	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Energy	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	3,355.6764	3,355.6764	0.1947	0.0590	3,378.1111
Mobile	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Stationary	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Waste						0.0000	0.0000		0.0000	0.0000	142.2946	0.0000	142.2946	8.4094	0.0000	352.5289
Water						0.0000	0.0000		0.0000	0.0000	49.8775	142.7180	192.5955	5.1419	0.1233	357.8729
Total	**9.1969**	**8.0719**	**31.1183**	**0.1015**	**5.0847**	**0.2379**	**5.3226**	**1.4442**	**0.2333**	**1.6775**	**192.1722**	**11,822.9557**	**12,015.1278**	**14.1206**	**0.1850**	**12,423.2586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**44.61**	**0.27**	**1.53**	**40.71**	**14.26**	**3.40**

3.0 Construction Detail

Construction Phase

Point Molate - Commercial Heavy - Full Build Out with Mitigation - Contra Costa County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2021	5/19/2021	5	78	
2	Site Preparation	Site Preparation	3/1/2021	7/1/2021	5	89	
3	Grading	Grading	4/1/2021	3/31/2022	5	261	
4	Paving	Paving	1/1/2022	6/24/2022	5	125	
5	Bay Trail Grading	Grading	3/1/2022	3/1/2023	5	262	
6	Building Construction	Building Construction	12/23/2022	11/30/2028	5	1550	
7	Architectural Coating	Architectural Coating	9/1/2023	2/1/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 3,076,380; Residential Outdoor: 1,025,460; Non-Residential Indoor: 944,355; Non-Residential Outdoor: 314,785; Striped Parking Area: 2,400 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Bay Trail Grading	Excavators	1	6.00	158	0.38
Bay Trail Grading	Graders	1	6.00	187	0.41
Bay Trail Grading	Off-Highway Trucks	1	8.00	367	0.48
Bay Trail Grading	Paving Equipment	1	8.00	132	0.36
Bay Trail Grading	Plate Compactors	1	8.00	8	0.43
Bay Trail Grading	Rubber Tired Dozers	1	6.00	247	0.40
Bay Trail Grading	Scrapers	2	8.00	367	0.48
Bay Trail Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	8	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
Demolition	6	15.00	0.00	227.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	34,067.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Bay Trail Grading	9	23.00	0.00	1,033.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,628.00	478.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	326.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0246	0.0000	0.0246	3.7300e-003	0.0000	3.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1234	1.2262	0.8410	1.5100e-003		0.0605	0.0605		0.0562	0.0562	0.0000	132.6031	132.6031	0.0373	0.0000	133.5361
Total	**0.1234**	**1.2262**	**0.8410**	**1.5100e-003**	**0.0246**	**0.0605**	**0.0851**	**3.7300e-003**	**0.0562**	**0.0599**	**0.0000**	**132.6031**	**132.6031**	**0.0373**	**0.0000**	**133.5361**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	1.6800e-003	0.0000	1.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0180	0.0781	0.9079	1.5100e-003		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	132.6029	132.6029	0.0373	0.0000	133.5360
Total	**0.0180**	**0.0781**	**0.9079**	**1.5100e-003**	**0.0111**	**2.4000e-003**	**0.0135**	**1.6800e-003**	**2.4000e-003**	**4.0800e-003**	**0.0000**	**132.6029**	**132.6029**	**0.0373**	**0.0000**	**133.5360**

3.2 Demolition - 2021

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	8.8000e-004	0.0304	6.0200e-003	9.0000e-005	1.9200e-003	1.0000e-004	2.0200e-003	5.3000e-004	9.0000e-005	6.2000e-004	0.0000	8.5003	8.5003	3.7000e-004	0.0000	8.5096
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	1.8100e-003	1.2700e-003	0.0134	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9261	3.9261	9.0000e-005	0.0000	3.9283
Total	**2.6900e-003**	**0.0317**	**0.0194**	**1.3000e-004**	**6.5600e-003**	**1.3000e-004**	**6.6900e-003**	**1.7600e-003**	**1.2000e-004**	**1.8800e-003**	**0.0000**	**12.4264**	**12.4264**	**4.6000e-004**	**0.0000**	**12.4379**

3.3 Site Preparation - 2021

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					0.8040	0.0000	0.8040	0.4419	0.0000	0.4419	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1730	1.8021	0.9414	1.6900e-003		0.0910	0.0910		0.0837	0.0837	0.0000	148.7889	148.7889	0.0481	0.0000	149.9920
Total	**0.1730**	**1.8021**	**0.9414**	**1.6900e-003**	**0.8040**	**0.0910**	**0.8949**	**0.4419**	**0.0837**	**0.5256**	**0.0000**	**148.7889**	**148.7889**	**0.0481**	**0.0000**	**149.9920**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3618	0.0000	0.3618	0.1989	0.0000	0.1989	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.0898	0.9287	1.6900e-003		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	148.7888	148.7888	0.0481	0.0000	149.9918
Total	**0.0207**	**0.0898**	**0.9287**	**1.6900e-003**	**0.3618**	**2.7600e-003**	**0.3645**	**0.1989**	**2.7600e-003**	**0.2016**	**0.0000**	**148.7888**	**148.7888**	**0.0481**	**0.0000**	**149.9918**

3.3 Site Preparation - 2021

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	2.4800e-003	1.7300e-003	0.0183	6.0000e-005	6.3500e-003	4.0000e-005	6.3900e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.3757	5.3757	1.2000e-004	0.0000	5.3788
Total	**2.4800e-003**	**1.7300e-003**	**0.0183**	**6.0000e-005**	**6.3500e-003**	**4.0000e-005**	**6.3900e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.3757**	**5.3757**	**1.2000e-004**	**0.0000**	**5.3788**

3.4 Grading - 2021

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					0.6409	0.0000	0.6409	0.3312	0.0000	0.3312	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7790	8.7873	5.8014	0.0121		0.3596	0.3596		0.3308	0.3308	0.0000	1,061.4523	1,061.4523	0.3433	0.0000	1,070.0347
Total	**0.7790**	**8.7873**	**5.8014**	**0.0121**	**0.6409**	**0.3596**	**1.0005**	**0.3312**	**0.3308**	**0.6621**	**0.0000**	**1,061.4523**	**1,061.4523**	**0.3433**	**0.0000**	**1,070.0347**

3.4 Grading - 2021

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	0.0999	3.4422	0.6822	9.9800e-003	0.2709	0.0109	0.2817	0.0729	0.0104	0.0833	0.0000	962.8716	962.8716	0.0422	0.0000	963.9273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1090**	**3.4486**	**0.7499**	**0.0102**	**0.2943**	**0.0110**	**0.3053**	**0.0791**	**0.0105**	**0.0897**	**0.0000**	**982.7033**	**982.7033**	**0.0427**	**0.0000**	**983.7703**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2884	0.0000	0.2884	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2582	2.1053	5.9685	0.0121		0.0776	0.0776		0.0727	0.0727	0.0000	1,061.4511	1,061.4511	0.3433	0.0000	1,070.0334
Total	**0.2582**	**2.1053**	**5.9685**	**0.0121**	**0.2884**	**0.0776**	**0.3660**	**0.1490**	**0.0727**	**0.2218**	**0.0000**	**1,061.4511**	**1,061.4511**	**0.3433**	**0.0000**	**1,070.0334**

3.4 Grading - 2021

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	0.0999	3.4422	0.6822	9.9800e-003	0.2709	0.0109	0.2817	0.0729	0.0104	0.0833	0.0000	962.8716	962.8716	0.0422	0.0000	963.9273
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.1500e-003	6.4000e-003	0.0677	2.2000e-004	0.0234	1.5000e-004	0.0236	6.2300e-003	1.4000e-004	6.3700e-003	0.0000	19.8317	19.8317	4.5000e-004	0.0000	19.8430
Total	**0.1090**	**3.4486**	**0.7499**	**0.0102**	**0.2943**	**0.0110**	**0.3053**	**0.0791**	**0.0105**	**0.0897**	**0.0000**	**982.7033**	**982.7033**	**0.0427**	**0.0000**	**983.7703**

3.4 Grading - 2022

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					0.2404	0.0000	0.2404	0.1111	0.0000	0.1111	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2209	2.3878	1.7454	3.9300e-003		0.0970	0.0970		0.0892	0.0892	0.0000	345.2407	345.2407	0.1117	0.0000	348.0322
Total	**0.2209**	**2.3878**	**1.7454**	**3.9300e-003**	**0.2404**	**0.0970**	**0.3374**	**0.1111**	**0.0892**	**0.2003**	**0.0000**	**345.2407**	**345.2407**	**0.1117**	**0.0000**	**348.0322**

3.4 Grading - 2022

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	0.0306	1.0254	0.2175	3.2000e-003	0.2340	3.0100e-003	0.2370	0.0595	2.8800e-003	0.0624	0.0000	308.6316	308.6316	0.0133	0.0000	308.9640
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0333**	**1.0273**	**0.2377**	**3.2700e-003**	**0.2416**	**3.0600e-003**	**0.2447**	**0.0615**	**2.9200e-003**	**0.0645**	**0.0000**	**314.8352**	**314.8352**	**0.0134**	**0.0000**	**315.1708**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1082	0.0000	0.1082	0.0500	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0786	0.5995	1.9088	3.9300e-003		0.0220	0.0220		0.0207	0.0207	0.0000	345.2403	345.2403	0.1117	0.0000	348.0318
Total	**0.0786**	**0.5995**	**1.9088**	**3.9300e-003**	**0.1082**	**0.0220**	**0.1302**	**0.0500**	**0.0207**	**0.0706**	**0.0000**	**345.2403**	**345.2403**	**0.1117**	**0.0000**	**348.0318**

3.4 Grading - 2022

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	0.0306	1.0254	0.2175	3.2000e-003	0.2340	3.0100e-003	0.2370	0.0595	2.8800e-003	0.0624	0.0000	308.6316	308.6316	0.0133	0.0000	308.9640
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	2.7600e-003	1.8600e-003	0.0202	7.0000e-005	7.6100e-003	5.0000e-005	7.6600e-003	2.0200e-003	4.0000e-005	2.0700e-003	0.0000	6.2036	6.2036	1.3000e-004	0.0000	6.2069
Total	**0.0333**	**1.0273**	**0.2377**	**3.2700e-003**	**0.2416**	**3.0600e-003**	**0.2447**	**0.0615**	**2.9200e-003**	**0.0645**	**0.0000**	**314.8352**	**314.8352**	**0.0134**	**0.0000**	**315.1708**

3.5 Paving - 2022

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1722	125.1722	0.0405	0.0000	126.1843
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1722**	**125.1722**	**0.0405**	**0.0000**	**126.1843**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

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	0.0689	0.6953	0.9113	1.4300e-003		0.0355	0.0355		0.0327	0.0327	0.0000	125.1721	125.1721	0.0405	0.0000	126.1842
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0689**	**0.6953**	**0.9113**	**1.4300e-003**		**0.0355**	**0.0355**		**0.0327**	**0.0327**	**0.0000**	**125.1721**	**125.1721**	**0.0405**	**0.0000**	**126.1842**

3.5 Paving - 2022

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	2.7000e-003	1.8200e-003	0.0197	7.0000e-005	7.4400e-003	5.0000e-005	7.4800e-003	1.9800e-003	4.0000e-005	2.0200e-003	0.0000	6.0582	6.0582	1.3000e-004	0.0000	6.0614
Total	**2.7000e-003**	**1.8200e-003**	**0.0197**	**7.0000e-005**	**7.4400e-003**	**5.0000e-005**	**7.4800e-003**	**1.9800e-003**	**4.0000e-005**	**2.0200e-003**	**0.0000**	**6.0582**	**6.0582**	**1.3000e-004**	**0.0000**	**6.0614**

3.6 Bay Trail Grading - 2022

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					0.4960	0.0000	0.4960	0.2720	0.0000	0.2720	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4053	4.1437	3.0396	7.4600e-003		0.1689	0.1689		0.1555	0.1555	0.0000	654.0597	654.0597	0.2108	0.0000	659.3293
Total	**0.4053**	**4.1437**	**3.0396**	**7.4600e-003**	**0.4960**	**0.1689**	**0.6650**	**0.2720**	**0.1555**	**0.4275**	**0.0000**	**654.0597**	**654.0597**	**0.2108**	**0.0000**	**659.3293**

3.6 Bay Trail Grading - 2022

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	3.1600e-003	0.1060	0.0225	3.3000e-004	8.3900e-003	3.1000e-004	8.7000e-003	2.2800e-003	3.0000e-004	2.5700e-003	0.0000	31.9014	31.9014	1.3700e-003	0.0000	31.9358
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0104**	**0.1109**	**0.0755**	**5.1000e-004**	**0.0284**	**4.4000e-004**	**0.0288**	**7.5900e-003**	**4.2000e-004**	**8.0000e-003**	**0.0000**	**48.1761**	**48.1761**	**1.7100e-003**	**0.0000**	**48.2191**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2232	0.0000	0.2232	0.1224	0.0000	0.1224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1395	1.0055	3.6043	7.4600e-003		0.0384	0.0384		0.0361	0.0361	0.0000	654.0590	654.0590	0.2108	0.0000	659.3286
Total	**0.1395**	**1.0055**	**3.6043**	**7.4600e-003**	**0.2232**	**0.0384**	**0.2616**	**0.1224**	**0.0361**	**0.1585**	**0.0000**	**654.0590**	**654.0590**	**0.2108**	**0.0000**	**659.3286**

3.6 Bay Trail Grading - 2022

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	3.1600e-003	0.1060	0.0225	3.3000e-004	8.3900e-003	3.1000e-004	8.7000e-003	2.2800e-003	3.0000e-004	2.5700e-003	0.0000	31.9014	31.9014	1.3700e-003	0.0000	31.9358
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	7.2500e-003	4.8900e-003	0.0530	1.8000e-004	0.0200	1.3000e-004	0.0201	5.3100e-003	1.2000e-004	5.4300e-003	0.0000	16.2747	16.2747	3.4000e-004	0.0000	16.2833
Total	**0.0104**	**0.1109**	**0.0755**	**5.1000e-004**	**0.0284**	**4.4000e-004**	**0.0288**	**7.5900e-003**	**4.2000e-004**	**8.0000e-003**	**0.0000**	**48.1761**	**48.1761**	**1.7100e-003**	**0.0000**	**48.2191**

3.6 Bay Trail Grading - 2023

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					0.0986	0.0000	0.0986	0.0535	0.0000	0.0535	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0740	0.7283	0.5768	1.4700e-003		0.0293	0.0293		0.0270	0.0270	0.0000	128.4369	128.4369	0.0414	0.0000	129.4717
Total	**0.0740**	**0.7283**	**0.5768**	**1.4700e-003**	**0.0986**	**0.0293**	**0.1279**	**0.0535**	**0.0270**	**0.0805**	**0.0000**	**128.4369**	**128.4369**	**0.0414**	**0.0000**	**129.4717**

3.6 Bay Trail Grading - 2023

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	4.2000e-004	0.0137	3.9800e-003	6.0000e-005	6.9200e-003	3.0000e-005	6.9400e-003	1.7400e-003	2.0000e-005	1.7600e-003	0.0000	6.0251	6.0251	2.3000e-004	0.0000	6.0310
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.7500e-003**	**0.0146**	**0.0136**	**9.0000e-005**	**0.0108**	**5.0000e-005**	**0.0109**	**2.7800e-003**	**4.0000e-005**	**2.8300e-003**	**0.0000**	**9.0965**	**9.0965**	**2.9000e-004**	**0.0000**	**9.1039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0444	0.0000	0.0444	0.0241	0.0000	0.0241	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.1874	0.7054	1.4700e-003		7.1300e-003	7.1300e-003		6.7200e-003	6.7200e-003	0.0000	128.4368	128.4368	0.0414	0.0000	129.4716
Total	**0.0269**	**0.1874**	**0.7054**	**1.4700e-003**	**0.0444**	**7.1300e-003**	**0.0515**	**0.0241**	**6.7200e-003**	**0.0308**	**0.0000**	**128.4368**	**128.4368**	**0.0414**	**0.0000**	**129.4716**

3.6 Bay Trail Grading - 2023

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	4.2000e-004	0.0137	3.9800e-003	6.0000e-005	6.9200e-003	3.0000e-005	6.9400e-003	1.7400e-003	2.0000e-005	1.7600e-003	0.0000	6.0251	6.0251	2.3000e-004	0.0000	6.0310
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	1.3300e-003	8.6000e-004	9.5700e-003	3.0000e-005	3.9200e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0700e-003	0.0000	3.0714	3.0714	6.0000e-005	0.0000	3.0729
Total	**1.7500e-003**	**0.0146**	**0.0136**	**9.0000e-005**	**0.0108**	**5.0000e-005**	**0.0109**	**2.7800e-003**	**4.0000e-005**	**2.8300e-003**	**0.0000**	**9.0965**	**9.0965**	**2.9000e-004**	**0.0000**	**9.1039**

3.7 Building Construction - 2022

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	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.3800e-003	0.1400	0.0353	3.8000e-004	9.4300e-003	2.9000e-004	9.7200e-003	2.7300e-003	2.8000e-004	3.0000e-003	0.0000	36.7183	36.7183	1.6300e-003	0.0000	36.7591
Worker	0.0141	9.4800e-003	0.1028	3.5000e-004	0.0387	2.5000e-004	0.0390	0.0103	2.3000e-004	0.0105	0.0000	31.5607	31.5607	6.7000e-004	0.0000	31.5774
Total	**0.0184**	**0.1495**	**0.1381**	**7.3000e-004**	**0.0482**	**5.4000e-004**	**0.0487**	**0.0130**	**5.1000e-004**	**0.0135**	**0.0000**	**68.2790**	**68.2790**	**2.3000e-003**	**0.0000**	**68.3365**

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	9.8000e-004	6.7000e-003	0.0524	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**9.8000e-004**	**6.7000e-003**	**0.0524**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

3.7 Building Construction - 2022

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	4.3800e-003	0.1400	0.0353	3.8000e-004	9.4300e-003	2.9000e-004	9.7200e-003	2.7300e-003	2.8000e-004	3.0000e-003	0.0000	36.7183	36.7183	1.6300e-003	0.0000	36.7591
Worker	0.0141	9.4800e-003	0.1028	3.5000e-004	0.0387	2.5000e-004	0.0390	0.0103	2.3000e-004	0.0105	0.0000	31.5607	31.5607	6.7000e-004	0.0000	31.5774
Total	**0.0184**	**0.1495**	**0.1381**	**7.3000e-004**	**0.0482**	**5.4000e-004**	**0.0487**	**0.0130**	**5.1000e-004**	**0.0135**	**0.0000**	**68.2790**	**68.2790**	**2.3000e-003**	**0.0000**	**68.3365**

3.7 Building Construction - 2023

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.7 Building Construction - 2023

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	0.1431	4.6177	1.3639	0.0162	0.4087	5.5100e-003	0.4142	0.1182	5.2700e-003	0.1234	0.0000	1,546.8359	1,546.8359	0.0582	0.0000	1,548.2905
Worker	0.5676	0.3688	4.0946	0.0145	1.6786	0.0104	1.6890	0.4464	9.6000e-003	0.4560	0.0000	1,314.5008	1,314.5008	0.0259	0.0000	1,315.1489
Total	**0.7107**	**4.9865**	**5.4585**	**0.0307**	**2.0873**	**0.0159**	**2.1032**	**0.5646**	**0.0149**	**0.5795**	**0.0000**	**2,861.3367**	**2,861.3367**	**0.0841**	**0.0000**	**2,863.4395**

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	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.7 Building Construction - 2023

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	0.1431	4.6177	1.3639	0.0162	0.4087	5.5100e-003	0.4142	0.1182	5.2700e-003	0.1234	0.0000	1,546.8359	1,546.8359	0.0582	0.0000	1,548.2905
Worker	0.5676	0.3688	4.0946	0.0145	1.6786	0.0104	1.6890	0.4464	9.6000e-003	0.4560	0.0000	1,314.5008	1,314.5008	0.0259	0.0000	1,315.1489
Total	**0.7107**	**4.9865**	**5.4585**	**0.0307**	**2.0873**	**0.0159**	**2.1032**	**0.5646**	**0.0149**	**0.5795**	**0.0000**	**2,861.3367**	**2,861.3367**	**0.0841**	**0.0000**	**2,863.4395**

3.7 Building Construction - 2024

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.7 Building Construction - 2024

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	0.1393	4.5917	1.3179	0.0162	0.4119	5.4400e-003	0.4173	0.1191	5.2000e-003	0.1243	0.0000	1,548.5528	1,548.5528	0.0571	0.0000	1,549.9791
Worker	0.5352	0.3351	3.8156	0.0141	1.6915	0.0103	1.7018	0.4499	9.4800e-003	0.4593	0.0000	1,271.4159	1,271.4159	0.0235	0.0000	1,272.0029
Total	**0.6744**	**4.9268**	**5.1336**	**0.0302**	**2.1033**	**0.0157**	**2.1191**	**0.5689**	**0.0147**	**0.5836**	**0.0000**	**2,819.9687**	**2,819.9687**	**0.0805**	**0.0000**	**2,821.9820**

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	0.0429	0.2928	2.2873	3.5300e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0429**	**0.2928**	**2.2873**	**3.5300e-003**		**5.3400e-003**	**5.3400e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.7 Building Construction - 2024

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	0.1393	4.5917	1.3179	0.0162	0.4119	5.4400e-003	0.4173	0.1191	5.2000e-003	0.1243	0.0000	1,548.5528	1,548.5528	0.0571	0.0000	1,549.9791
Worker	0.5352	0.3351	3.8156	0.0141	1.6915	0.0103	1.7018	0.4499	9.4800e-003	0.4593	0.0000	1,271.4159	1,271.4159	0.0235	0.0000	1,272.0029
Total	**0.6744**	**4.9268**	**5.1336**	**0.0302**	**2.1033**	**0.0157**	**2.1191**	**0.5689**	**0.0147**	**0.5836**	**0.0000**	**2,819.9687**	**2,819.9687**	**0.0805**	**0.0000**	**2,821.9820**

3.7 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2025

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	0.1346	4.5106	1.2702	0.0160	0.4103	5.3000e-003	0.4156	0.1186	5.0600e-003	0.1237	0.0000	1,532.8798	1,532.8798	0.0553	0.0000	1,534.2628
Worker	0.5017	0.3029	3.5158	0.0134	1.6850	0.0101	1.6951	0.4481	9.3000e-003	0.4574	0.0000	1,214.2945	1,214.2945	0.0212	0.0000	1,214.8235
Total	**0.6363**	**4.8135**	**4.7860**	**0.0294**	**2.0953**	**0.0154**	**2.1107**	**0.5668**	**0.0144**	**0.5811**	**0.0000**	**2,747.1742**	**2,747.1742**	**0.0765**	**0.0000**	**2,749.0862**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2025

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	0.1346	4.5106	1.2702	0.0160	0.4103	5.3000e-003	0.4156	0.1186	5.0600e-003	0.1237	0.0000	1,532.8798	1,532.8798	0.0553	0.0000	1,534.2628
Worker	0.5017	0.3029	3.5158	0.0134	1.6850	0.0101	1.6951	0.4481	9.3000e-003	0.4574	0.0000	1,214.2945	1,214.2945	0.0212	0.0000	1,214.8235
Total	**0.6363**	**4.8135**	**4.7860**	**0.0294**	**2.0953**	**0.0154**	**2.1107**	**0.5668**	**0.0144**	**0.5811**	**0.0000**	**2,747.1742**	**2,747.1742**	**0.0765**	**0.0000**	**2,749.0862**

3.7 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2026

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	0.1310	4.4479	1.2382	0.0159	0.4103	5.1700e-003	0.4155	0.1186	4.9400e-003	0.1236	0.0000	1,523.9971	1,523.9971	0.0539	0.0000	1,525.3448
Worker	0.4745	0.2767	3.2700	0.0129	1.6850	9.8100e-003	1.6948	0.4481	9.0300e-003	0.4572	0.0000	1,168.4922	1,168.4922	0.0192	0.0000	1,168.9730
Total	**0.6055**	**4.7246**	**4.5082**	**0.0288**	**2.0953**	**0.0150**	**2.1103**	**0.5668**	**0.0140**	**0.5807**	**0.0000**	**2,692.4893**	**2,692.4893**	**0.0731**	**0.0000**	**2,694.3178**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2026

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	0.1310	4.4479	1.2382	0.0159	0.4103	5.1700e-003	0.4155	0.1186	4.9400e-003	0.1236	0.0000	1,523.9971	1,523.9971	0.0539	0.0000	1,525.3448
Worker	0.4745	0.2767	3.2700	0.0129	1.6850	9.8100e-003	1.6948	0.4481	9.0300e-003	0.4572	0.0000	1,168.4922	1,168.4922	0.0192	0.0000	1,168.9730
Total	**0.6055**	**4.7246**	**4.5082**	**0.0288**	**2.0953**	**0.0150**	**2.1103**	**0.5668**	**0.0140**	**0.5807**	**0.0000**	**2,692.4893**	**2,692.4893**	**0.0731**	**0.0000**	**2,694.3178**

3.7 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.7 Building Construction - 2027

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	0.1280	4.3843	1.2126	0.0158	0.4103	5.0400e-003	0.4154	0.1186	4.8200e-003	0.1235	0.0000	1,515.6354	1,515.6354	0.0526	0.0000	1,516.9499
Worker	0.4486	0.2536	3.0539	0.0125	1.6850	9.3100e-003	1.6943	0.4481	8.5700e-003	0.4567	0.0000	1,128.0446	1,128.0446	0.0175	0.0000	1,128.4830
Total	**0.5765**	**4.6380**	**4.2665**	**0.0283**	**2.0953**	**0.0144**	**2.1097**	**0.5668**	**0.0134**	**0.5802**	**0.0000**	**2,643.6800**	**2,643.6800**	**0.0701**	**0.0000**	**2,645.4329**

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	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.7 Building Construction - 2027

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	0.1280	4.3843	1.2126	0.0158	0.4103	5.0400e-003	0.4154	0.1186	4.8200e-003	0.1235	0.0000	1,515.6354	1,515.6354	0.0526	0.0000	1,516.9499
Worker	0.4486	0.2536	3.0539	0.0125	1.6850	9.3100e-003	1.6943	0.4481	8.5700e-003	0.4567	0.0000	1,128.0446	1,128.0446	0.0175	0.0000	1,128.4830
Total	**0.5765**	**4.6380**	**4.2665**	**0.0283**	**2.0953**	**0.0144**	**2.1097**	**0.5668**	**0.0134**	**0.5802**	**0.0000**	**2,643.6800**	**2,643.6800**	**0.0701**	**0.0000**	**2,645.4329**

3.7 Building Construction - 2028

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	0.1634	1.4901	1.9221	3.2200e-003		0.0630	0.0630		0.0593	0.0593	0.0000	277.1438	277.1438	0.0652	0.0000	278.7724
Total	**0.1634**	**1.4901**	**1.9221**	**3.2200e-003**		**0.0630**	**0.0630**		**0.0593**	**0.0593**	**0.0000**	**277.1438**	**277.1438**	**0.0652**	**0.0000**	**278.7724**

3.7 Building Construction - 2028

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	0.1149	3.9662	1.0940	0.0144	0.3758	4.5100e-003	0.3803	0.1086	4.3100e-003	0.1129	0.0000	1,381.5206	1,381.5206	0.0471	0.0000	1,382.6969
Worker	0.3867	0.2136	2.6234	0.0111	1.5430	7.9100e-003	1.5509	0.4104	7.2800e-003	0.4176	0.0000	1,000.4770	1,000.4770	0.0147	0.0000	1,000.8450
Total	**0.5016**	**4.1798**	**3.7174**	**0.0255**	**1.9187**	**0.0124**	**1.9311**	**0.5190**	**0.0116**	**0.5306**	**0.0000**	**2,381.9976**	**2,381.9976**	**0.0618**	**0.0000**	**2,383.5419**

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	0.0392	0.2671	2.0865	3.2200e-003		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	277.1434	277.1434	0.0652	0.0000	278.7721
Total	**0.0392**	**0.2671**	**2.0865**	**3.2200e-003**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**277.1434**	**277.1434**	**0.0652**	**0.0000**	**278.7721**

3.7 Building Construction - 2028

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	0.1149	3.9662	1.0940	0.0144	0.3758	4.5100e-003	0.3803	0.1086	4.3100e-003	0.1129	0.0000	1,381.5206	1,381.5206	0.0471	0.0000	1,382.6969
Worker	0.3867	0.2136	2.6234	0.0111	1.5430	7.9100e-003	1.5509	0.4104	7.2800e-003	0.4176	0.0000	1,000.4770	1,000.4770	0.0147	0.0000	1,000.8450
Total	**0.5016**	**4.1798**	**3.7174**	**0.0255**	**1.9187**	**0.0124**	**1.9311**	**0.5190**	**0.0116**	**0.5306**	**0.0000**	**2,381.9976**	**2,381.9976**	**0.0618**	**0.0000**	**2,383.5419**

3.8 Architectural Coating - 2023

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	10.9341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0659	0.4482	0.6230	1.0200e-003		0.0244	0.0244		0.0244	0.0244	0.0000	87.8319	87.8319	5.2500e-003	0.0000	87.9633
Total	**11.0000**	**0.4482**	**0.6230**	**1.0200e-003**		**0.0244**	**0.0244**		**0.0244**	**0.0244**	**0.0000**	**87.8319**	**87.8319**	**5.2500e-003**	**0.0000**	**87.9633**

3.8 Architectural Coating - 2023

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	0.0376	0.0244	0.2712	9.6000e-004	0.1112	6.9000e-004	0.1119	0.0296	6.4000e-004	0.0302	0.0000	87.0661	87.0661	1.7200e-003	0.0000	87.1090
Total	**0.0376**	**0.0244**	**0.2712**	**9.6000e-004**	**0.1112**	**6.9000e-004**	**0.1119**	**0.0296**	**6.4000e-004**	**0.0302**	**0.0000**	**87.0661**	**87.0661**	**1.7200e-003**	**0.0000**	**87.1090**

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	10.9341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0443	0.6304	1.0200e-003		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	87.8318	87.8318	5.2500e-003	0.0000	87.9632
Total	**10.9443**	**0.0443**	**0.6304**	**1.0200e-003**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**87.8318**	**87.8318**	**5.2500e-003**	**0.0000**	**87.9632**

3.8 Architectural Coating - 2023

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	0.0376	0.0244	0.2712	9.6000e-004	0.1112	6.9000e-004	0.1119	0.0296	6.4000e-004	0.0302	0.0000	87.0661	87.0661	1.7200e-003	0.0000	87.1090
Total	**0.0376**	**0.0244**	**0.2712**	**9.6000e-004**	**0.1112**	**6.9000e-004**	**0.1119**	**0.0296**	**6.4000e-004**	**0.0302**	**0.0000**	**87.0661**	**87.0661**	**1.7200e-003**	**0.0000**	**87.1090**

3.8 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.1170	0.1738	2.9000e-004		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.0687**	**0.1170**	**0.1738**	**2.9000e-004**		**5.8500e-003**	**5.8500e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8200e-003	6.1500e-003	0.0700	2.6000e-004	0.0310	1.9000e-004	0.0312	8.2500e-003	1.7000e-004	8.4300e-003	0.0000	23.3217	23.3217	4.3000e-004	0.0000	23.3325
Total	**9.8200e-003**	**6.1500e-003**	**0.0700**	**2.6000e-004**	**0.0310**	**1.9000e-004**	**0.0312**	**8.2500e-003**	**1.7000e-004**	**8.4300e-003**	**0.0000**	**23.3217**	**23.3217**	**4.3000e-004**	**0.0000**	**23.3325**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1759	2.9000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	24.5112	24.5112	1.3800e-003	0.0000	24.5457
Total	**3.0542**	**0.0124**	**0.1759**	**2.9000e-004**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**24.5112**	**24.5112**	**1.3800e-003**	**0.0000**	**24.5457**

3.8 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8200e-003	6.1500e-003	0.0700	2.6000e-004	0.0310	1.9000e-004	0.0312	8.2500e-003	1.7000e-004	8.4300e-003	0.0000	23.3217	23.3217	4.3000e-004	0.0000	23.3325
Total	**9.8200e-003**	**6.1500e-003**	**0.0700**	**2.6000e-004**	**0.0310**	**1.9000e-004**	**0.0312**	**8.2500e-003**	**1.7000e-004**	**8.4300e-003**	**0.0000**	**23.3217**	**23.3217**	**4.3000e-004**	**0.0000**	**23.3325**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606
Unmitigated	2.8200	5.8831	29.3582	0.0874	5.0847	0.0690	5.1537	1.4442	0.0644	1.5086	0.0000	8,072.6244	8,072.6244	0.3575	0.0000	8,081.5606

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,814.40	1,972.32	1669.92	4,194,986	4,194,986
Apartments Low Rise	1,620.00	1,761.00	1491.00	3,745,523	3,745,523
Apartments Mid Rise	1,375.50	1,319.50	1211.00	3,104,112	3,104,112
City Park	56.70	682.50	502.20	447,770	447,770
City Park	5.16	62.11	45.70	40,747	40,747
Convenience Market (24 Hour)	0.00	0.00	0.00		
Office Park	2,088.42	301.38	138.28	3,896,052	3,896,052
Office Park	1,354.70	195.50	89.70	2,527,264	2,527,264
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Quality Restaurant	230.60	241.90	185.00	267,718	267,718
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Regional Shopping Center	230.60	269.80	136.30	390,511	390,511
Single Family Housing	1,893.34	1,970.06	1715.24	4,339,422	4,339,422
Unenclosed Parking Structure	202.00	202.00	202.00	153,839	153,839
Total	11,332.62	9,489.77	7,707.64	23,766,173	23,766,173

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Unenclosed Parking Structure	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Apartments Mid Rise	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
City Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Convenience Market (24 Hour)	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Office Park	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Quality Restaurant	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Regional Shopping Center	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Single Family Housing	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843
Unenclosed Parking Structure	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,148.0768	1,148.0768	0.1524	0.0185	1,157.3928
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,155.5539	1,155.5539	0.1534	0.0186	1,164.9305
NaturalGas Mitigated	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	2,207.5996	2,207.5996	0.0423	0.0405	2,220.7182
NaturalGas Unmitigated	0.2231	1.9516	1.1439	0.0122		0.1541	0.1541		0.1541	0.1541	0.0000	2,207.5996	2,207.5996	0.0423	0.0405	2,220.7182

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.85494e+006	0.0316	0.2698	0.1148	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.4418	312.4418	5.9900e-003	5.7300e-003	314.2985
Apartments Low Rise	6.55753e+006	0.0354	0.3022	0.1286	1.9300e-003		0.0244	0.0244		0.0244	0.0244	0.0000	349.9348	349.9348	6.7100e-003	6.4200e-003	352.0143
Apartments Mid Rise	2.95491e+006	0.0159	0.1362	0.0579	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.6853	157.6853	3.0200e-003	2.8900e-003	158.6223
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Office Park	4.6828e+006	0.0253	0.2296	0.1928	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	249.8920	249.8920	4.7900e-003	4.5800e-003	251.3770
Office Park	7.21905e+006	0.0389	0.3539	0.2973	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.2357	385.2357	7.3800e-003	7.0600e-003	387.5250
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2231**	**1.9516**	**1.1439**	**0.0122**		**0.1541**	**0.1541**		**0.1541**	**0.1541**	**0.0000**	**2,207.5996**	**2,207.5996**	**0.0423**	**0.0405**	**2,220.7182**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.85494e+006	0.0316	0.2698	0.1148	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.4418	312.4418	5.9900e-003	5.7300e-003	314.2985
Apartments Low Rise	6.55753e+006	0.0354	0.3022	0.1286	1.9300e-003		0.0244	0.0244		0.0244	0.0244	0.0000	349.9348	349.9348	6.7100e-003	6.4200e-003	352.0143
Apartments Mid Rise	2.95491e+006	0.0159	0.1362	0.0579	8.7000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	157.6853	157.6853	3.0200e-003	2.8900e-003	158.6223
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	30000	1.6000e-004	1.4700e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6009	1.6009	3.0000e-005	3.0000e-005	1.6104
Office Park	4.6828e+006	0.0253	0.2296	0.1928	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	249.8920	249.8920	4.7900e-003	4.5800e-003	251.3770
Office Park	7.21905e+006	0.0389	0.3539	0.2973	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.2357	385.2357	7.3800e-003	7.0600e-003	387.5250
Quality Restaurant	1.693e+006	0.0183	0.1660	0.1394	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	180.6899	180.6899	3.4600e-003	3.3100e-003	181.7636
Regional Shopping Center	54800	5.9000e-004	5.3700e-003	4.5100e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8487	5.8487	1.1000e-004	1.1000e-004	5.8834
Single Family Housing	1.0574e+007	0.0570	0.4872	0.2073	3.1100e-003		0.0394	0.0394		0.0394	0.0394	0.0000	564.2705	564.2705	0.0108	0.0103	567.6237
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2231**	**1.9516**	**1.1439**	**0.0122**		**0.1541**	**0.1541**		**0.1541**	**0.1541**	**0.0000**	**2,207.5996**	**2,207.5996**	**0.0423**	**0.0405**	**2,220.7182**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.43682e+006	162.0011	0.0215	2.6100e-003	163.3156
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Office Park	3.1073e+006	350.3464	0.0465	5.6400e-003	353.1892
Office Park	4.79024e+006	540.0970	0.0717	8.6900e-003	544.4796
Quality Restaurant	294800	66.4771	8.8300e-003	1.0700e-003	67.0165
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**1,155.5539**	**0.1534**	**0.0186**	**1,164.9305**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	0	0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise	1.39967e+006	157.8118	0.0210	2.5400e-003	159.0924
City Park	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	60700	6.8439	9.1000e-004	1.1000e-004	6.8994
Office Park	3.1073e+006	350.3464	0.0465	5.6400e-003	353.1892
Office Park	4.79024e+006	540.0970	0.0717	8.6900e-003	544.4796
Quality Restaurant	280220	63.1893	8.3900e-003	1.0200e-003	63.7021
Regional Shopping Center	109300	24.6470	3.2700e-003	4.0000e-004	24.8470
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking Structure	45600	5.1414	6.8000e-004	8.0000e-005	5.1831
Total		**1,148.0768**	**0.1524**	**0.0185**	**1,157.3928**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.1214	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Unmitigated	7.3949	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.3985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.9812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**7.3949**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.9812					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0151	0.1294	0.0550	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8072	149.8072	2.8700e-003	2.7500e-003	150.6974
Total	**6.1214**	**0.1294**	**0.0550**	**8.3000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**149.8072**	**149.8072**	**2.8700e-003**	**2.7500e-003**	**150.6974**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	192.5955	5.1419	0.1233	357.8729
Unmitigated	229.0438	6.4258	0.1539	435.5457

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	44.0441 / 27.7669	51.8014	1.4402	0.0345	98.0863
Apartments Mid Rise	22.8039 / 14.3764	26.8203	0.7457	0.0179	50.7844
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.370363 / 0.226996	0.4330	0.0121	2.9000e-004	0.8222
Office Park	103.898 / 63.6793	121.4781	3.3973	0.0814	230.6560
Quality Restaurant	6.07067 / 0.38749	5.7825	0.1983	4.7300e-003	12.1510
Regional Shopping Center	1.48145 / 0.907986	1.7321	0.0484	1.1600e-003	3.2889
Single Family Housing	17.8522 / 11.2546	20.9964	0.5838	0.0140	39.7569
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**229.0438**	**6.4258**	**0.1539**	**435.5457**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.2353 / 27.7669	43.6326	1.1525	0.0276	80.6784
Apartments Mid Rise	18.2431 / 14.3764	22.5909	0.5967	0.0143	41.7713
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0.29629 / 0.226996	0.3643	9.6900e-003	2.3000e-004	0.6758
Office Park	83.1183 / 63.6793	102.2083	2.7185	0.0652	189.5915
Quality Restaurant	4.85654 / 0.38749	4.6566	0.1587	3.7900e-003	9.7516
Regional Shopping Center	1.18516 / 0.907986	1.4574	0.0388	9.3000e-004	2.7033
Single Family Housing	14.2818 / 11.2546	17.6854	0.4671	0.0112	32.7010
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**192.5955**	**5.1418**	**0.1233**	**357.8729**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	142.2946	8.4094	0.0000	352.5289
Unmitigated	284.5893	16.8187	0.0000	705.0579

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	310.96	63.1221	3.7304	0.0000	156.3823
Apartments Mid Rise	161	32.6816	1.9314	0.0000	80.9671
City Park	2.81	0.5704	0.0337	0.0000	1.4132
Convenience Market (24 Hour)	15.03	3.0510	0.1803	0.0000	7.5586
Office Park	543.65	110.3560	6.5219	0.0000	273.4024
Quality Restaurant	18.25	3.7046	0.2189	0.0000	9.1780
Regional Shopping Center	21	4.2628	0.2519	0.0000	10.5609
Single Family Housing	329.28	66.8409	3.9502	0.0000	165.5954
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**284.5893**	**16.8187**	**0.0000**	**705.0579**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	155.48	31.5610	1.8652	0.0000	78.1911
Apartments Mid Rise	80.5	16.3408	0.9657	0.0000	40.4836
City Park	1.405	0.2852	0.0169	0.0000	0.7066
Convenience Market (24 Hour)	7.515	1.5255	0.0902	0.0000	3.7793
Office Park	271.825	55.1780	3.2609	0.0000	136.7012
Quality Restaurant	9.125	1.8523	0.1095	0.0000	4.5890
Regional Shopping Center	10.5	2.1314	0.1260	0.0000	5.2805
Single Family Housing	164.64	33.4204	1.9751	0.0000	82.7977
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**142.2946**	**8.4094**	**0.0000**	**352.5290**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	2	50	2682	0.73	Diesel
Emergency Generator	1	2	50	2682	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0324	0.1079	0.5611	1.0600e-003		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	102.1298	102.1298	0.0143	0.0000	102.4878
Total	**0.0324**	**0.1079**	**0.5611**	**1.0600e-003**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**102.1298**	**102.1298**	**0.0143**	**0.0000**	**102.4878**

11.0 Vegetation

Point Molate - Wastewater treatment plant

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.66	1000sqft	0.13	5,660.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	5			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Same operational year as Project.

Land Use -

Construction Phase - No demolition, paving or achitectural coating.

Off-road Equipment - No architectural coating

Off-road Equipment - No demolition phase

Off-road Equipment -

Off-road Equipment - No paving phase

Off-road Equipment -

Off-road Equipment -

Trips and VMT - No trips associated with demolition, paving and architectural coating. 25 haul trips/day for plant installation.

Vehicle Trips - Worker trip emissions; estimating emissions from Brine trips separately.

Vehicle Emission Factors - EMFAC 2017

Road Dust - Updated silt loading factor for Contra Costa County from the CARB 2018 Miscellaneous Process Methodology 7.9 for Entrained Road Travel, Paved Road Dust.

Consumer Products - Statewide consumer product emission factors for 2017. 2017 value calculated using the growth in California population and the 2008 total building square footage.

Landscape Equipment - No landscaping equipment to be used

Energy Use - Energy use calculated based on equipment HP and operating hours provided by AES.

Water And Wastewater - Zero wastewater consummption.

Construction Off-road Equipment Mitigation - Tier 4 construction equipment; BAAQMD construction best management practices

Fleet Mix - Fleet mix based on EMFAC 2017

Stationary Sources - Emergency Generators and Fire Pumps - Assumed a generator of 2,000 kW.

Stationary Sources - Emergency Generators and Fire Pumps EF - Tier 4 emission factors for TOG, ROG, NOX, PM10 and PM2.5.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.62E-05
tblEnergyUse	T24E	1.21	249.10
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.59	0.57
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.9730e-003	5.5120e-003
tblFleetMix	MCY	5.3010e-003	5.2670e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	7.7100e-004	8.4300e-004
tblFleetMix	MHD	0.01	0.01
tblFleetMix	OBUS	1.6400e-003	8.5200e-004

tblFleetMix	SBUS	2.7150e-003	1.2220e-003
tblFleetMix	UBUS	1.7060e-003	9.1200e-004
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblRoadDust	RoadSiltLoading	0.1	0.047
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	3.3100e-004
tblStationaryGeneratorsPumpsEF	TOG_EF	2.4700e-003	3.3100e-004
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblVehicleEF	HHD	0.41	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.58	6.28
tblVehicleEF	HHD	0.84	0.40
tblVehicleEF	HHD	2.87	5.3000e-003
tblVehicleEF	HHD	4,335.05	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.83	5.34

tblVehicleEF	HHD	1.90	2.66
tblVehicleEF	HHD	19.75	2.36
tblVehicleEF	HHD	7.9210e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	7.5790e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.41	0.42
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3500e-004	0.00
tblVehicleEF	HHD	7.6000e-005	0.00
tblVehicleEF	HHD	4.1410e-003	1.0000e-004
tblVehicleEF	HHD	0.48	0.49
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07

tblVehicleEF	HHD	3.4400e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.39	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.15	6.28
tblVehicleEF	HHD	0.85	0.40
tblVehicleEF	HHD	2.61	5.3000e-003
tblVehicleEF	HHD	4,592.60	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	14.28	5.34
tblVehicleEF	HHD	1.83	2.66
tblVehicleEF	HHD	19.74	2.36
tblVehicleEF	HHD	6.6780e-003	2.6000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	6.3890e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.39	0.42

tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3100e-004	0.00
tblVehicleEF	HHD	2.0200e-004	0.00
tblVehicleEF	HHD	4.5990e-003	1.0000e-004
tblVehicleEF	HHD	0.45	0.49
tblVehicleEF	HHD	1.2500e-004	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.3800e-004	0.00
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	0.45	0.02
tblVehicleEF	HHD	0.04	0.05
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.17	6.28
tblVehicleEF	HHD	0.83	0.40
tblVehicleEF	HHD	3.11	5.3000e-003
tblVehicleEF	HHD	3,979.39	1,039.23
tblVehicleEF	HHD	1,539.35	1,409.20
tblVehicleEF	HHD	8.78	0.04
tblVehicleEF	HHD	13.22	5.34
tblVehicleEF	HHD	1.93	2.66
tblVehicleEF	HHD	19.77	2.36
tblVehicleEF	HHD	9.6380e-003	2.6000e-003

tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.1930e-003	0.02
tblVehicleEF	HHD	9.4000e-005	0.00
tblVehicleEF	HHD	9.2210e-003	2.5000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8110e-003	8.9000e-003
tblVehicleEF	HHD	5.9250e-003	0.02
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	0.04	9.7000e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.3900e-004	0.00
tblVehicleEF	HHD	2.9000e-005	0.00
tblVehicleEF	HHD	4.3280e-003	1.0000e-004
tblVehicleEF	HHD	0.51	0.49
tblVehicleEF	HHD	2.1000e-005	0.00
tblVehicleEF	HHD	0.14	0.07
tblVehicleEF	HHD	3.8100e-004	0.00
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	LDA	3.2820e-003	1.8000e-003

tblVehicleEF	LDA	4.5120e-003	0.05
tblVehicleEF	LDA	0.48	0.52
tblVehicleEF	LDA	1.04	2.15
tblVehicleEF	LDA	229.87	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.2620e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	2.3010e-003	2.4000e-003
tblVehicleEF	LDA	5.4600e-004	5.0000e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.07	0.23

tblVehicleEF	LDA	3.7280e-003	1.8000e-003
tblVehicleEF	LDA	3.6390e-003	0.05
tblVehicleEF	LDA	0.58	0.52
tblVehicleEF	LDA	0.80	2.15
tblVehicleEF	LDA	251.31	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	9.3650e-003	6.6000e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.21
tblVehicleEF	LDA	2.5170e-003	2.4000e-003
tblVehicleEF	LDA	5.4200e-004	5.0000e-004
tblVehicleEF	LDA	0.07	0.04
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.01	9.6000e-003
tblVehicleEF	LDA	0.03	0.03

tblVehicleEF	LDA	0.05	0.23
tblVehicleEF	LDA	3.1830e-003	1.8000e-003
tblVehicleEF	LDA	5.1540e-003	0.05
tblVehicleEF	LDA	0.47	0.52
tblVehicleEF	LDA	1.24	2.15
tblVehicleEF	LDA	226.93	239.59
tblVehicleEF	LDA	52.85	50.81
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.6840e-003	1.3000e-003
tblVehicleEF	LDA	2.2790e-003	1.7000e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	1.5520e-003	1.2000e-003
tblVehicleEF	LDA	2.0950e-003	1.6000e-003
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	8.0170e-003	6.6000e-003
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.2720e-003	2.4000e-003
tblVehicleEF	LDA	5.4900e-004	5.0000e-004
tblVehicleEF	LDA	9.2570e-003	0.04
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.01	0.04
tblVehicleEF	LDA	0.01	9.6000e-003

tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDT1	6.8390e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.88	0.87
tblVehicleEF	LDT1	2.31	2.34
tblVehicleEF	LDT1	287.67	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.13	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.15	0.32
tblVehicleEF	LDT1	2.8860e-003	2.8000e-003
tblVehicleEF	LDT1	7.0800e-004	6.0000e-004
tblVehicleEF	LDT1	0.08	0.09
tblVehicleEF	LDT1	0.21	0.18
tblVehicleEF	LDT1	0.07	0.08

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.14	0.08
tblVehicleEF	LDT1	0.16	0.35
tblVehicleEF	LDT1	7.6930e-003	3.8000e-003
tblVehicleEF	LDT1	8.8990e-003	0.07
tblVehicleEF	LDT1	1.05	0.87
tblVehicleEF	LDT1	1.76	2.34
tblVehicleEF	LDT1	313.61	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.11	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18
tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.12	0.32
tblVehicleEF	LDT1	3.1480e-003	2.8000e-003
tblVehicleEF	LDT1	6.9900e-004	6.0000e-004
tblVehicleEF	LDT1	0.21	0.09
tblVehicleEF	LDT1	0.25	0.18

tblVehicleEF	LDT1	0.16	0.08
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	0.13	0.08
tblVehicleEF	LDT1	0.13	0.35
tblVehicleEF	LDT1	6.6770e-003	3.8000e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	0.87	0.87
tblVehicleEF	LDT1	2.76	2.34
tblVehicleEF	LDT1	284.11	287.73
tblVehicleEF	LDT1	66.83	61.75
tblVehicleEF	LDT1	0.10	0.07
tblVehicleEF	LDT1	0.14	0.24
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	2.0930e-003	1.7000e-003
tblVehicleEF	LDT1	2.9260e-003	2.2000e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.9260e-003	1.5000e-003
tblVehicleEF	LDT1	2.6900e-003	2.0000e-003
tblVehicleEF	LDT1	0.03	0.09
tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	2.8500e-003	2.8000e-003
tblVehicleEF	LDT1	7.1600e-004	6.0000e-004
tblVehicleEF	LDT1	0.03	0.09

tblVehicleEF	LDT1	0.23	0.18
tblVehicleEF	LDT1	0.03	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.17	0.08
tblVehicleEF	LDT1	0.19	0.35
tblVehicleEF	LDT2	4.4150e-003	2.9000e-003
tblVehicleEF	LDT2	5.8360e-003	0.06
tblVehicleEF	LDT2	0.62	0.70
tblVehicleEF	LDT2	1.34	2.74
tblVehicleEF	LDT2	323.78	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	3.2420e-003	3.0000e-003
tblVehicleEF	LDT2	7.6900e-004	7.0000e-004

tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.0080e-003	2.9000e-003
tblVehicleEF	LDT2	4.7080e-003	0.06
tblVehicleEF	LDT2	0.75	0.70
tblVehicleEF	LDT2	1.03	2.74
tblVehicleEF	LDT2	353.38	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.08	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	3.5390e-003	3.0000e-003

tblVehicleEF	LDT2	7.6400e-004	7.0000e-004
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.11	0.12
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.05
tblVehicleEF	LDT2	0.07	0.32
tblVehicleEF	LDT2	4.2820e-003	2.9000e-003
tblVehicleEF	LDT2	6.6640e-003	0.06
tblVehicleEF	LDT2	0.60	0.70
tblVehicleEF	LDT2	1.58	2.74
tblVehicleEF	LDT2	319.73	307.00
tblVehicleEF	LDT2	74.71	66.18
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.26
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	1.6770e-003	1.3000e-003
tblVehicleEF	LDT2	2.3140e-003	1.7000e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.5420e-003	1.2000e-003
tblVehicleEF	LDT2	2.1270e-003	1.6000e-003
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.09	0.29

tblVehicleEF	LDT2	3.2010e-003	3.0000e-003
tblVehicleEF	LDT2	7.7400e-004	7.0000e-004
tblVehicleEF	LDT2	0.01	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.02	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.99	0.77
tblVehicleEF	LHD1	2.29	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.39	0.94
tblVehicleEF	LHD1	0.94	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03

tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4200e-004	1.0000e-004
tblVehicleEF	LHD1	2.2690e-003	1.8000e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3040e-003	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	1.01	0.77
tblVehicleEF	LHD1	2.10	0.99
tblVehicleEF	LHD1	9.15	9.11

tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.33	0.94
tblVehicleEF	LHD1	0.87	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.3800e-004	1.0000e-004
tblVehicleEF	LHD1	5.7400e-003	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.9740e-003	1.0000e-003
tblVehicleEF	LHD1	0.16	0.12
tblVehicleEF	LHD1	0.31	0.20
tblVehicleEF	LHD1	0.24	0.08
tblVehicleEF	LHD1	4.9090e-003	4.8000e-003
tblVehicleEF	LHD1	0.02	8.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.98	0.77
tblVehicleEF	LHD1	2.47	0.99
tblVehicleEF	LHD1	9.15	9.11
tblVehicleEF	LHD1	681.50	776.98
tblVehicleEF	LHD1	29.86	10.85
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	1.42	0.94
tblVehicleEF	LHD1	1.00	0.30
tblVehicleEF	LHD1	9.4400e-004	9.0000e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.9000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	8.5100e-004	2.0000e-004
tblVehicleEF	LHD1	9.0300e-004	9.0000e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5520e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	7.8200e-004	2.0000e-004

tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.1000e-005	1.0000e-004
tblVehicleEF	LHD1	6.6780e-003	7.6000e-003
tblVehicleEF	LHD1	3.4500e-004	1.0000e-004
tblVehicleEF	LHD1	8.1400e-004	1.8000e-003
tblVehicleEF	LHD1	0.11	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	5.8600e-004	1.0000e-003
tblVehicleEF	LHD1	0.15	0.12
tblVehicleEF	LHD1	0.35	0.20
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.0300e-003	6.9000e-003
tblVehicleEF	LHD2	5.6740e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	1.02	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11

tblVehicleEF	LHD2	0.77	0.98
tblVehicleEF	LHD2	0.40	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4300e-004	1.0000e-004
tblVehicleEF	LHD2	6.3300e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.9400e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	7.1180e-003	6.9000e-003
tblVehicleEF	LHD2	5.3450e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.56	0.64
tblVehicleEF	LHD2	0.94	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.74	0.98
tblVehicleEF	LHD2	0.38	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.07	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4200e-004	1.0000e-004
tblVehicleEF	LHD2	1.5900e-003	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.9600e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	3.0810e-003	2.9000e-003
tblVehicleEF	LHD2	6.9590e-003	6.9000e-003
tblVehicleEF	LHD2	5.9550e-003	7.3000e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.55	0.64
tblVehicleEF	LHD2	1.09	0.55
tblVehicleEF	LHD2	14.17	14.31
tblVehicleEF	LHD2	700.23	754.66
tblVehicleEF	LHD2	22.53	7.04
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.78	0.98
tblVehicleEF	LHD2	0.42	0.17
tblVehicleEF	LHD2	1.2540e-003	1.5000e-003

tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.6400e-004	1.0000e-004
tblVehicleEF	LHD2	1.2000e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7050e-003	2.7000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	3.3500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.08	0.04
tblVehicleEF	LHD2	1.3800e-004	1.0000e-004
tblVehicleEF	LHD2	6.8040e-003	7.3000e-003
tblVehicleEF	LHD2	2.4500e-004	1.0000e-004
tblVehicleEF	LHD2	2.4600e-004	8.0000e-004
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8000e-004	5.0000e-004
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	MCY	0.46	0.34

tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	19.70	20.00
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.27	2.29
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.23	1.98
tblVehicleEF	MCY	2.1230e-003	2.1000e-003
tblVehicleEF	MCY	6.8900e-004	6.0000e-004
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.74	0.75
tblVehicleEF	MCY	0.55	0.56
tblVehicleEF	MCY	2.81	2.82
tblVehicleEF	MCY	0.60	0.56
tblVehicleEF	MCY	2.43	2.15

tblVehicleEF	MCY	0.44	0.34
tblVehicleEF	MCY	0.13	0.26
tblVehicleEF	MCY	18.98	20.00
tblVehicleEF	MCY	8.86	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.02	1.16
tblVehicleEF	MCY	0.29	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.18	2.29
tblVehicleEF	MCY	0.56	0.56
tblVehicleEF	MCY	1.83	1.98
tblVehicleEF	MCY	2.1090e-003	2.1000e-003
tblVehicleEF	MCY	6.5400e-004	6.0000e-004
tblVehicleEF	MCY	2.59	0.89
tblVehicleEF	MCY	1.06	0.75
tblVehicleEF	MCY	1.70	0.56
tblVehicleEF	MCY	2.70	2.82
tblVehicleEF	MCY	0.56	0.56

tblVehicleEF	MCY	1.99	2.15
tblVehicleEF	MCY	0.47	0.34
tblVehicleEF	MCY	0.19	0.26
tblVehicleEF	MCY	21.47	20.00
tblVehicleEF	MCY	11.78	9.07
tblVehicleEF	MCY	173.46	213.40
tblVehicleEF	MCY	45.58	61.71
tblVehicleEF	MCY	1.25	1.16
tblVehicleEF	MCY	0.35	0.27
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0890e-003	2.0000e-003
tblVehicleEF	MCY	3.6840e-003	3.0000e-003
tblVehicleEF	MCY	5.0400e-003	5.0000e-003
tblVehicleEF	MCY	1.9530e-003	1.9000e-003
tblVehicleEF	MCY	3.4690e-003	2.8000e-003
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.37	2.29
tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.62	1.98
tblVehicleEF	MCY	2.1550e-003	2.1000e-003
tblVehicleEF	MCY	7.2600e-004	6.0000e-004
tblVehicleEF	MCY	0.17	0.89
tblVehicleEF	MCY	0.85	0.75
tblVehicleEF	MCY	0.16	0.56
tblVehicleEF	MCY	2.94	2.82

tblVehicleEF	MCY	0.70	0.56
tblVehicleEF	MCY	2.85	2.15
tblVehicleEF	MDV	8.6020e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.97	0.82
tblVehicleEF	MDV	2.71	3.10
tblVehicleEF	MDV	443.89	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4430e-003	3.8000e-003
tblVehicleEF	MDV	1.0620e-003	8.0000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.07	0.08

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.22	0.42
tblVehicleEF	MDV	9.7400e-003	3.8000e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.18	0.82
tblVehicleEF	MDV	2.08	3.10
tblVehicleEF	MDV	483.31	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.21	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15
tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.16	0.38
tblVehicleEF	MDV	4.8400e-003	3.8000e-003
tblVehicleEF	MDV	1.0500e-003	8.0000e-004
tblVehicleEF	MDV	0.15	0.07
tblVehicleEF	MDV	0.20	0.15

tblVehicleEF	MDV	0.14	0.08
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.18	0.42
tblVehicleEF	MDV	8.3570e-003	3.8000e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	0.96	0.82
tblVehicleEF	MDV	3.22	3.10
tblVehicleEF	MDV	438.49	379.50
tblVehicleEF	MDV	101.43	81.06
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.26	0.32
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	1.7420e-003	1.5000e-003
tblVehicleEF	MDV	2.3930e-003	1.8000e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	1.6050e-003	1.3000e-003
tblVehicleEF	MDV	2.2000e-003	1.7000e-003
tblVehicleEF	MDV	0.02	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.23	0.38
tblVehicleEF	MDV	4.3890e-003	3.8000e-003
tblVehicleEF	MDV	1.0710e-003	8.0000e-004
tblVehicleEF	MDV	0.02	0.07

tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.03	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MDV	0.25	0.42
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.46	0.85
tblVehicleEF	MH	4.96	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.34	1.52
tblVehicleEF	MH	0.78	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.29	0.09

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6600e-004	2.0000e-004
tblVehicleEF	MH	0.68	0.58
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.27	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.32	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.52	0.85
tblVehicleEF	MH	4.45	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.26	1.52
tblVehicleEF	MH	0.72	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23

tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.27	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	2.0000e-004
tblVehicleEF	MH	1.73	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.63	0.23
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	9.3000e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.41	0.85
tblVehicleEF	MH	5.39	1.96
tblVehicleEF	MH	1,212.36	1,512.95
tblVehicleEF	MH	57.99	17.73
tblVehicleEF	MH	1.38	1.52
tblVehicleEF	MH	0.83	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	9.7500e-004	2.0000e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2290e-003	3.3000e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	8.9700e-004	2.0000e-004

tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.31	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7400e-004	2.0000e-004
tblVehicleEF	MH	0.23	0.58
tblVehicleEF	MH	0.07	0.05
tblVehicleEF	MH	0.12	0.23
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.34	0.10
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.4400e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.37	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.47	1.19
tblVehicleEF	MHD	134.03	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.38	0.52
tblVehicleEF	MHD	1.11	1.47
tblVehicleEF	MHD	10.23	1.66
tblVehicleEF	MHD	1.4100e-004	5.0000e-004

tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.3500e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.05
tblVehicleEF	MHD	1.2910e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0200e-004	1.0000e-004
tblVehicleEF	MHD	7.9700e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	4.6600e-004	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.36	0.06
tblVehicleEF	MHD	0.01	4.0000e-003
tblVehicleEF	MHD	4.5430e-003	2.1000e-003
tblVehicleEF	MHD	0.04	0.01

tblVehicleEF	MHD	0.26	0.43
tblVehicleEF	MHD	0.36	0.27
tblVehicleEF	MHD	4.98	1.19
tblVehicleEF	MHD	142.13	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.40	0.52
tblVehicleEF	MHD	1.07	1.47
tblVehicleEF	MHD	10.17	1.66
tblVehicleEF	MHD	1.1900e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.1400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004
tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.31	0.05
tblVehicleEF	MHD	1.3670e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	6.9400e-004	1.0000e-004

tblVehicleEF	MHD	2.0780e-003	4.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.1250e-003	2.0000e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.0000e-003
tblVehicleEF	MHD	4.3600e-003	2.1000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.35	0.27
tblVehicleEF	MHD	5.94	1.19
tblVehicleEF	MHD	123.22	84.01
tblVehicleEF	MHD	1,189.25	1,109.33
tblVehicleEF	MHD	60.64	10.07
tblVehicleEF	MHD	0.37	0.52
tblVehicleEF	MHD	1.13	1.47
tblVehicleEF	MHD	10.28	1.66
tblVehicleEF	MHD	1.7100e-004	5.0000e-004
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	3.2360e-003	7.2000e-003
tblVehicleEF	MHD	8.9200e-004	1.0000e-004
tblVehicleEF	MHD	1.6400e-004	5.0000e-004
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0890e-003	6.9000e-003
tblVehicleEF	MHD	8.2100e-004	1.0000e-004

tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.35	0.05
tblVehicleEF	MHD	1.1890e-003	8.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.1000e-004	1.0000e-004
tblVehicleEF	MHD	2.7800e-004	4.0000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.38	0.06
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.3020e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.53	0.98
tblVehicleEF	OBUS	5.50	2.88
tblVehicleEF	OBUS	71.68	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.14	0.23
tblVehicleEF	OBUS	0.75	1.13
tblVehicleEF	OBUS	2.17	0.68

tblVehicleEF	OBUS	1.3000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.2000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.34	0.14
tblVehicleEF	OBUS	6.9600e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8700e-004	2.0000e-004
tblVehicleEF	OBUS	1.1280e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	5.5800e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.37	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.5680e-003	9.0000e-003

tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.24	0.50
tblVehicleEF	OBUS	0.55	0.98
tblVehicleEF	OBUS	4.94	2.88
tblVehicleEF	OBUS	74.94	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.15	0.23
tblVehicleEF	OBUS	0.71	1.13
tblVehicleEF	OBUS	2.10	0.68
tblVehicleEF	OBUS	1.1000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.0000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003
tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.32	0.14
tblVehicleEF	OBUS	7.2700e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	7.7700e-004	2.0000e-004
tblVehicleEF	OBUS	2.7740e-003	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	1.2950e-003	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.35	0.15
tblVehicleEF	OBUS	0.01	8.8000e-003
tblVehicleEF	OBUS	8.0920e-003	9.0000e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.50
tblVehicleEF	OBUS	0.52	0.98
tblVehicleEF	OBUS	5.95	2.88
tblVehicleEF	OBUS	67.19	65.66
tblVehicleEF	OBUS	1,277.67	1,496.24
tblVehicleEF	OBUS	69.06	21.75
tblVehicleEF	OBUS	0.13	0.23
tblVehicleEF	OBUS	0.77	1.13
tblVehicleEF	OBUS	2.23	0.68
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	2.3690e-003	6.1000e-003
tblVehicleEF	OBUS	8.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.5000e-005	1.0000e-004
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.2410e-003	5.8000e-003

tblVehicleEF	OBUS	7.9300e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.36	0.14
tblVehicleEF	OBUS	6.5300e-004	6.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9500e-004	2.0000e-004
tblVehicleEF	OBUS	4.9300e-004	1.7000e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.06
tblVehicleEF	OBUS	2.6500e-004	8.0000e-004
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.39	0.15
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1030e-003	2.6000e-003
tblVehicleEF	SBUS	0.06	1.3000e-003
tblVehicleEF	SBUS	2.09	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.33	0.19
tblVehicleEF	SBUS	1,440.18	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09

tblVehicleEF	SBUS	13.22	2.23
tblVehicleEF	SBUS	4.78	2.75
tblVehicleEF	SBUS	19.18	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003
tblVehicleEF	SBUS	0.07	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2700e-004	0.00
tblVehicleEF	SBUS	4.1200e-004	1.0000e-004
tblVehicleEF	SBUS	4.0500e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	2.0500e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.7590e-003	1.6000e-003

tblVehicleEF	SBUS	0.07	8.0000e-003
tblVehicleEF	SBUS	0.87	0.02
tblVehicleEF	SBUS	6.1440e-003	2.6000e-003
tblVehicleEF	SBUS	0.05	1.3000e-003
tblVehicleEF	SBUS	1.93	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	0.91	0.19
tblVehicleEF	SBUS	1,522.68	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	13.64	2.23
tblVehicleEF	SBUS	4.59	2.75
tblVehicleEF	SBUS	19.17	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00
tblVehicleEF	SBUS	9.5970e-003	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.24	0.09
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003

tblVehicleEF	SBUS	0.05	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.2100e-004	0.00
tblVehicleEF	SBUS	1.0160e-003	1.0000e-004
tblVehicleEF	SBUS	4.2620e-003	8.0000e-004
tblVehicleEF	SBUS	0.33	0.12
tblVehicleEF	SBUS	4.7800e-004	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	1.5050e-003	1.6000e-003
tblVehicleEF	SBUS	0.06	8.0000e-003
tblVehicleEF	SBUS	0.88	0.02
tblVehicleEF	SBUS	6.0730e-003	2.6000e-003
tblVehicleEF	SBUS	0.07	1.3000e-003
tblVehicleEF	SBUS	2.33	1.26
tblVehicleEF	SBUS	0.40	0.22
tblVehicleEF	SBUS	1.66	0.19
tblVehicleEF	SBUS	1,326.25	299.60
tblVehicleEF	SBUS	1,240.06	991.09
tblVehicleEF	SBUS	10.45	1.09
tblVehicleEF	SBUS	12.63	2.23
tblVehicleEF	SBUS	4.86	2.75
tblVehicleEF	SBUS	19.19	1.56
tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.7600e-004	0.00

tblVehicleEF	SBUS	0.01	1.5000e-003
tblVehicleEF	SBUS	2.9310e-003	2.9000e-003
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	1.6200e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.25	0.09
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.11	0.04
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	7.3000e-003
tblVehicleEF	SBUS	0.01	2.8000e-003
tblVehicleEF	SBUS	0.01	9.4000e-003
tblVehicleEF	SBUS	1.3300e-004	0.00
tblVehicleEF	SBUS	1.8000e-004	1.0000e-004
tblVehicleEF	SBUS	4.1040e-003	8.0000e-004
tblVehicleEF	SBUS	0.34	0.12
tblVehicleEF	SBUS	9.7000e-005	0.00
tblVehicleEF	SBUS	0.13	0.05
tblVehicleEF	SBUS	2.2590e-003	1.6000e-003
tblVehicleEF	SBUS	0.08	8.0000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.07	1.5000e-003
tblVehicleEF	UBUS	4.04	8.13
tblVehicleEF	UBUS	11.74	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75

tblVehicleEF	UBUS	5.66	0.64
tblVehicleEF	UBUS	12.20	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.98	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7290e-003	0.00
tblVehicleEF	UBUS	4.9640e-003	1.0000e-004
tblVehicleEF	UBUS	0.09	8.0000e-004
tblVehicleEF	UBUS	2.7550e-003	1.0000e-004
tblVehicleEF	UBUS	0.65	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	1.08	5.8000e-003
tblVehicleEF	UBUS	0.24	1.10
tblVehicleEF	UBUS	0.06	1.5000e-003
tblVehicleEF	UBUS	4.11	8.13

tblVehicleEF	UBUS	9.17	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.41	0.64
tblVehicleEF	UBUS	12.07	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.39	0.02
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.85	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.6840e-003	0.00
tblVehicleEF	UBUS	0.01	1.0000e-004
tblVehicleEF	UBUS	0.11	8.0000e-004
tblVehicleEF	UBUS	6.3130e-003	1.0000e-004
tblVehicleEF	UBUS	0.66	1.12
tblVehicleEF	UBUS	0.02	1.0000e-004
tblVehicleEF	UBUS	0.93	5.8000e-003

tblVehicleEF	UBUS	0.23	1.10
tblVehicleEF	UBUS	0.08	1.5000e-003
tblVehicleEF	UBUS	4.00	8.13
tblVehicleEF	UBUS	14.08	0.25
tblVehicleEF	UBUS	1,955.59	1,559.20
tblVehicleEF	UBUS	151.51	2.75
tblVehicleEF	UBUS	5.77	0.64
tblVehicleEF	UBUS	12.31	0.03
tblVehicleEF	UBUS	0.49	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9000e-003
tblVehicleEF	UBUS	1.3120e-003	0.00
tblVehicleEF	UBUS	0.21	0.03
tblVehicleEF	UBUS	3.0000e-003	7.2000e-003
tblVehicleEF	UBUS	0.10	4.7000e-003
tblVehicleEF	UBUS	1.2060e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004
tblVehicleEF	UBUS	0.38	0.02
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.10	5.3000e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.7700e-003	0.00
tblVehicleEF	UBUS	1.8670e-003	1.0000e-004
tblVehicleEF	UBUS	0.10	8.0000e-004
tblVehicleEF	UBUS	1.2710e-003	1.0000e-004

tblVehicleEF	UBUS	0.64	1.12
tblVehicleEF	UBUS	0.03	1.0000e-004
tblVehicleEF	UBUS	1.20	5.8000e-003
tblWater	IndoorWaterUseRate	1,308,875.00	0.00

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					
2023	1.7100e-003	0.0194	0.0179	5.0000e-005	1.5600e-003	7.2000e-004	2.2900e-003	5.9000e-004	6.8000e-004	1.2700e-003	0.0000	4.3633	4.3633	7.2000e-004	0.0000	4.3814
Maximum	**1.7100e-003**	**0.0194**	**0.0179**	**5.0000e-005**	**1.5600e-003**	**7.2000e-004**	**2.2900e-003**	**5.9000e-004**	**6.8000e-004**	**1.2700e-003**	**0.0000**	**4.3633**	**4.3633**	**7.2000e-004**	**0.0000**	**4.3814**

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					
2023	5.0000e-004	5.5800e-003	0.0197	5.0000e-005	1.0000e-003	5.0000e-005	1.0600e-003	3.5000e-004	5.0000e-005	4.0000e-004	0.0000	4.3633	4.3633	7.2000e-004	0.0000	4.3814
Maximum	**5.0000e-004**	**5.5800e-003**	**0.0197**	**5.0000e-005**	**1.0000e-003**	**5.0000e-005**	**1.0600e-003**	**3.5000e-004**	**5.0000e-005**	**4.0000e-004**	**0.0000**	**4.3633**	**4.3633**	**7.2000e-004**	**0.0000**	**4.3814**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**70.76**	**71.28**	**-9.93**	**0.00**	**35.90**	**93.06**	**53.71**	**40.68**	**92.65**	**68.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-1-2023**	**4-30-2023**	0.0232	0.0079
		Highest	0.0232	0.0079

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	428.0889	428.0889	0.0192	4.0700e-003	429.7815
Mobile	8.5000e-003	0.0201	0.0987	3.2000e-004	0.0186	2.5000e-004	0.0189	5.2900e-003	2.3000e-004	5.5200e-003	0.0000	29.2898	29.2898	1.1400e-003	0.0000	29.3181
Stationary	0.0162	0.0540	0.2806	5.3000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	51.0649	51.0649	7.1600e-003	0.0000	51.2439
Waste						0.0000	0.0000		0.0000	0.0000	1.4250	0.0000	1.4250	0.0842	0.0000	3.5304
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0452**	**0.0809**	**0.3850**	**8.9000e-004**	**0.0186**	**2.9300e-003**	**0.0215**	**5.2900e-003**	**2.9100e-003**	**8.2000e-003**	**1.4250**	**508.4436**	**509.8686**	**0.1117**	**4.0700e-003**	**513.8738**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	428.0889	428.0889	0.0192	4.0700e-003	429.7815
Mobile	8.5000e-003	0.0201	0.0987	3.2000e-004	0.0186	2.5000e-004	0.0189	5.2900e-003	2.3000e-004	5.5200e-003	0.0000	29.2898	29.2898	1.1400e-003	0.0000	29.3181
Stationary	0.0162	0.0540	0.2806	5.3000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	51.0649	51.0649	7.1600e-003	0.0000	51.2439
Waste						0.0000	0.0000		0.0000	0.0000	1.4250	0.0000	1.4250	0.0842	0.0000	3.5304
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0452**	**0.0809**	**0.3850**	**8.9000e-004**	**0.0186**	**2.9300e-003**	**0.0215**	**5.2900e-003**	**2.9100e-003**	**8.2000e-003**	**1.4250**	**508.4436**	**509.8686**	**0.1117**	**4.0700e-003**	**513.8738**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**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	Demolition	Demolition	2/1/2023	1/31/2023	5	0	
2	Site Preparation	Site Preparation	2/15/2023	2/15/2023	5	1	
3	Grading	Grading	2/16/2023	2/17/2023	5	2	
4	Plant Installation	Building Construction	2/18/2023	2/21/2023	5	2	
5	Paving	Paving	7/8/2023	7/7/2023	5	0	
6	Architectural Coating	Architectural Coating	7/15/2023	7/14/2023	5	0	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,490; Non-Residential Outdoor: 2,830; Striped Parking Area: 0 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Point Molate - Wastewater treatment plant - Contra Costa County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Plant Installation	Cranes	1	4.00	231	0.29
Plant Installation	Forklifts	2	6.00	89	0.20
Plant Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving		0			
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	7.00	130	0.42
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	0	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
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Plant Installation	5	2.00	1.00	50.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2023

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	3.0900e-003	1.9600e-003	0.0000		1.1000e-004	1.1000e-004		1.0000e-004	1.0000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309
Total	**2.7000e-004**	**3.0900e-003**	**1.9600e-003**	**0.0000**	**2.7000e-004**	**1.1000e-004**	**3.8000e-004**	**3.0000e-005**	**1.0000e-004**	**1.3000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4309**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0155	0.0155	0.0000	0.0000	0.0155
Total	**1.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0155**	**0.0155**	**0.0000**	**0.0000**	**0.0155**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0000e-005	2.6000e-004	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309
Total	**6.0000e-005**	**2.6000e-004**	**2.6600e-003**	**0.0000**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**1.0000e-005**	**1.0000e-005**	**2.0000e-005**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4309**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0155	0.0155	0.0000	0.0000	0.0155
Total	**1.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0155**	**0.0155**	**0.0000**	**0.0000**	**0.0155**

3.4 Grading - 2023

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5000e-004	5.7800e-003	7.3900e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.7000e-004	2.7000e-004	0.0000	1.0418	1.0418	1.9000e-004	0.0000	1.0466
Total	**6.5000e-004**	**5.7800e-003**	**7.3900e-003**	**1.0000e-005**	**7.5000e-004**	**2.8000e-004**	**1.0300e-003**	**4.1000e-004**	**2.7000e-004**	**6.8000e-004**	**0.0000**	**1.0418**	**1.0418**	**1.9000e-004**	**0.0000**	**1.0466**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0621	0.0621	0.0000	0.0000	0.0621
Total	**3.0000e-005**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0621**	**0.0621**	**0.0000**	**0.0000**	**0.0621**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3000e-004	5.7000e-004	7.8500e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.0418	1.0418	1.9000e-004	0.0000	1.0466
Total	**1.3000e-004**	**5.7000e-004**	**7.8500e-003**	**1.0000e-005**	**3.4000e-004**	**2.0000e-005**	**3.6000e-004**	**1.9000e-004**	**2.0000e-005**	**2.1000e-004**	**0.0000**	**1.0418**	**1.0418**	**1.9000e-004**	**0.0000**	**1.0466**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0621	0.0621	0.0000	0.0000	0.0621
Total	**3.0000e-005**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0621**	**0.0621**	**0.0000**	**0.0000**	**0.0621**

3.5 Plant Installation - 2023

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	6.3000e-004	6.4200e-003	7.1000e-003	1.0000e-005		3.2000e-004	3.2000e-004		2.9000e-004	2.9000e-004	0.0000	1.0021	1.0021	3.2000e-004	0.0000	1.0102
Total	**6.3000e-004**	**6.4200e-003**	**7.1000e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**1.0021**	**1.0021**	**3.2000e-004**	**0.0000**	**1.0102**

3.5 Plant Installation - 2023

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	1.2000e-004	4.0400e-003	1.1700e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.2000e-004	0.0000	1.7769	1.7769	7.0000e-005	0.0000	1.7787
Vendor	0.0000	7.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0249	0.0249	0.0000	0.0000	0.0249
Worker	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0124	0.0124	0.0000	0.0000	0.0124
Total	**1.3000e-004**	**4.1100e-003**	**1.2300e-003**	**2.0000e-005**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**1.8142**	**1.8142**	**7.0000e-005**	**0.0000**	**1.8160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4000e-004	6.1000e-004	7.7300e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.0021	1.0021	3.2000e-004	0.0000	1.0102
Total	**1.4000e-004**	**6.1000e-004**	**7.7300e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.0021**	**1.0021**	**3.2000e-004**	**0.0000**	**1.0102**

3.5 Plant Installation - 2023

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	1.2000e-004	4.0400e-003	1.1700e-003	2.0000e-005	4.2000e-004	1.0000e-005	4.3000e-004	1.2000e-004	1.0000e-005	1.2000e-004	0.0000	1.7769	1.7769	7.0000e-005	0.0000	1.7787
Vendor	0.0000	7.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0249	0.0249	0.0000	0.0000	0.0249
Worker	1.0000e-005	0.0000	4.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0124	0.0124	0.0000	0.0000	0.0124
Total	**1.3000e-004**	**4.1100e-003**	**1.2300e-003**	**2.0000e-005**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**1.8142**	**1.8142**	**7.0000e-005**	**0.0000**	**1.8160**

3.6 Paving - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2023

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.5000e-003	0.0201	0.0987	3.2000e-004	0.0186	2.5000e-004	0.0189	5.2900e-003	2.3000e-004	5.5200e-003	0.0000	29.2898	29.2898	1.1400e-003	0.0000	29.3181
Unmitigated	8.5000e-003	0.0201	0.0987	3.2000e-004	0.0186	2.5000e-004	0.0189	5.2900e-003	2.3000e-004	5.5200e-003	0.0000	29.2898	29.2898	1.1400e-003	0.0000	29.3181

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	39.45	7.47	3.85	86,989	86,989
Total	39.45	7.47	3.85	86,989	86,989

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.569666	0.055696	0.181867	0.121259	0.023191	0.005512	0.010894	0.022819	0.000852	0.000912	0.005267	0.001222	0.000843

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	420.6135	420.6135	0.0190	3.9300e-003	422.2616
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	420.6135	420.6135	0.0190	3.9300e-003	422.2616
NaturalGas Mitigated	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4755	7.4755	1.4000e-004	1.4000e-004	7.5199
NaturalGas Unmitigated	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4755	7.4755	1.4000e-004	1.4000e-004	7.5199

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	140085	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4755	7.4755	1.4000e-004	1.4000e-004	7.5199
Total		**7.6000e-004**	**6.8700e-003**	**5.7700e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4755**	**7.4755**	**1.4000e-004**	**1.4000e-004**	**7.5199**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	140085	7.6000e-004	6.8700e-003	5.7700e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4755	7.4755	1.4000e-004	1.4000e-004	7.5199
Total		**7.6000e-004**	**6.8700e-003**	**5.7700e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4755**	**7.4755**	**1.4000e-004**	**1.4000e-004**	**7.5199**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.44585e+006	420.6135	0.0190	3.9300e-003	422.2616
Total		**420.6135**	**0.0190**	**3.9300e-003**	**422.2616**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.44585e+006	420.6135	0.0190	3.9300e-003	422.2616
Total		**420.6135**	**0.0190**	**3.9300e-003**	**422.2616**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0197					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0197**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0197**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.4250	0.0842	0.0000	3.5304
Unmitigated	1.4250	0.0842	0.0000	3.5304

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	7.02	1.4250	0.0842	0.0000	3.5304
Total		**1.4250**	**0.0842**	**0.0000**	**3.5304**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	7.02	1.4250	0.0842	0.0000	3.5304
Total		**1.4250**	**0.0842**	**0.0000**	**3.5304**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	2	50	2682	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0162	0.0540	0.2806	5.3000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	51.0649	51.0649	7.1600e-003	0.0000	51.2439
Total	**0.0162**	**0.0540**	**0.2806**	**5.3000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**51.0649**	**51.0649**	**7.1600e-003**	**0.0000**	**51.2439**

11.0 Vegetation

CONSTRUCTION HRA

ENVIRONMENT
& HEALTH

MEMO

Date: February 14, 2020

To: Bibiana Alvarez, Project Manager,
Analytical Environmental Services

From: Shari Libicki, PhD
Taylor Vencill, MS, PE

Subject: CONSTRUCTION HEALTH RISK ASSESSMENT FOR THE DEVELOPMENT AT POINT MOLATE, RICHMOND, CALIFORNIA

Ramboll
201 California Street
Suite 201
San Francisco, CA 94111
USA

T +1 415 796 1950
F +1 415 398 5812
www.ramboll.com

Ramboll US Corporation (Ramboll) conducted a construction Health Risk Assessment (HRA) for the proposed Project at Point Molate in Richmond, California ("the Project"). This memo details the methods and assumptions used in the HRA, including emissions estimation and dispersion modelling.

Ramboll understands that the Project consists of eight parcels of mixed-use development, a potential onsite waste water treatment plant (WWTP), and grading of the San Francisco Bay Trail[1]. Prior to construction of the eight parcels, some existing structures will be demolished. The eight parcels will be constructed sequentially over a period from 2024-2028, with residents potentially moving in to each parcel as it is completed, thus being exposed to construction activity of later parcels. The existing and proposed land uses at the Project site are listed in Table 1.

THRESHOLDS OF SIGNIFICANCE

The City of Richmond is the lead agency responsible for Project approval. Per City of Richmond requirements, Ramboll evaluated the Project in accordance with the current Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines, which were updated in May 2017.[2] These guidelines present methods for evaluating compliance with CEQA as well as thresholds for determining significance. With respect to the construction HRA, the BAAQMD thresholds of significance are as follows:

- Increased cancer risk of >10.0 in a million
- Increased non-cancer risk of > 1.0 HI (chronic or acute)
- Ambient $PM_{2.5}$ increase: > 0.3 µg/m^3 annual average

[1] The construction of the Bay Trail is already approved, however emissions within the Project site are conservatively considered here.

[2] BAAQMD. 2017. California Environmental Quality Act (CEQA) Air Quality Guidelines. May. Available online at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Ramboll evaluated each of these thresholds for both on-site sensitive receptors, assuming all eight parcels may include residential land uses, as well as the nearest off-site residential area. No other sensitive receptors were identified in the Project vicinity (see Appendix A). The Project location and nearby residential areas are shown in Figure 1.

CONSTRUCTION EMISSIONS

The following sections describe the input data and methodologies used in the construction HRA. Detailed information for each section can be found in the referenced tables and appendices.

Toxic Air Contaminant (TAC) Emissions

The TAC emissions associated with the Project construction were calculated with the following assumptions and exceptions:

1. Diesel Particulate Matter (DPM): DPM emissions were used to evaluate the cancer risk and non-cancer chronic HI from Project construction. In this analysis, both onsite (i.e., construction equipment) and local offsite (i.e., construction mobile sources) Particulate Matter less than 10 microns (PM_{10}) exhaust emissions[3] were calculated as DPM and modeled within the Project boundary (as discussed in the next section), and on the primary roadway connecting the Project site to the nearest highway. This analysis also conservatively assumed the small fraction of non-diesel PM_{10} (i.e., PM_{10} emissions from gasoline fueled passenger vehicles) was DPM, which has greater human health impacts. All off-road construction equipment was assumed to be certified as Tier 4 Final, with the exception of paving equipment.
2. $PM_{2.5}$: Exhaust Particulate Matter less 2.5 microns ($PM_{2.5}$) emissions were used to evaluate the $PM_{2.5}$ concentration due to the Project construction. All of the PM_{10} emissions were conservatively assumed to be $PM_{2.5}$, although some of the PM_{10} particles are, in actuality, larger than $PM_{2.5}$.

Modelled emissions are presented in Table 2 as total PM_{10} from construction; $PM_{2.5}$ emissions are conservatively assumed to be equivalent to these values.

Ramboll utilized the California Emission Estimator Model version 2016.3.2 (CalEEMod®)[4] to quantify all construction emissions. CalEEMod® is a statewide program designed to calculate emissions for development projects in California.

CalEEMod® utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. CalEEMod® uses sources such as the US Environmental Protection Agency (USEPA) AP-42 emission factors,[5] California Air Resources Board's (CARB) on-road and off-road equipment emission models such as the EMission FACtor model (EMFAC) and the Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

Construction emissions from the Project include both on-site, offroad heavy equipment as well as off-site, on-road vehicle travel. Where project-specific data were not available, Ramboll used CalEEMod®

---

[3] Local offsite (mobile source) emissions were calculated by including CalEEMod® on-road emissions for a one-way trip lengths of two miles, based on the modelled roadway from the Northern edge of the Project boundary to the freeway (See Figure 3).

[4] California Air Pollution Control Officers Association (CAPCOA). 2016. California Emissions Estimator Model. Available at: http://www.CalEEMod.com/.

[5] The USEPA maintains a compilation of Air pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. Available at: http://epa.gov/ttnchie1/ap42/.

defaults for the land uses shown in Table 1. The CalEEMod® output report is included as Appendix B.

Potential VOCs in Disturbed Soil

There are volatile organic compounds (VOCs) in the soil at the Site[6] that may be disturbed for construction as a result of the Project. Excavation for construction at locations where there are VOCs in the soil could result in exposures to VOCs. According to the Draft Phase I[7], chemicals that could become Toxic Air Contaminants, if airborne, were found in the VOCs at the site, including benzene.

To address the potential for VOCs at the site to pose a risk to workers, visitors and future occupants, the San Francisco Bay Regional Water Quality Control Board (SFRWQC) required the preparation of a Soil and Groundwater Management Plan (SGWMP). The SGWMP allows for and describes the protocols required in order to complete soil disturbance and building demolition activities at the Site. Examples of activities covered by the SGWMP include, but are not limited to, landscaping, installing and maintaining utilities, grading, trenching, installing deep foundations, drilling borings for subsurface exploration or monitoring well installation, building demolition, and constructing subsurface structures.

The SGWMP covers all portions of the Site except for IR Site 3 and IR Site 4, which are currently undergoing site-specific remediation activities. Recent remedial activities at IR Site 3 will require the SGWMP to be amended to incorporate specific requirements for activities conducted in IR Site 3, however, as of the writing of the Phase I ESA, these amendments to the SGWMP have not been completed.

The SGWMP was prepared in response to a mitigation measure for the previous EIR for the Point Molate site completed in 2011. In addition, it was completed in response to Task 2 of San Francisco Bay Regional Water Quality Control Board (RWQCB) Order #R2-2011-0087, which states: *"The Discharger shall propose a Soil and Groundwater Management Plan for the Facility, acceptable to the Executive Officer, identifying how soils and affected groundwater will be managed for any phase of cleanup activities at the Facility, including initial cleanup as well as cleanups related to discoveries during any future development of the Facility." It goes on to state that the plan "must propose how soil and groundwater will be sampled and analyzed during all phases of remediation and development, and how test results will be used to protect Facility workers and future occupants and visitors from residual pollutants."*

As noted above, the SGWMP is designed to ensure the safety of all individuals that may come into contact with the chemicals currently in the soils at the site. Accordingly, implementation of the SGWMP should result in de minimis risks to the existing offsite and future onsite residents.

Updates to CalEEMod® Default Assumptions

In preparing Project construction emissions, Ramboll made several updates to the CalEEMod® default factors and assumptions. These include the following areas:

- Project construction is assumed to use all Tier 4 Final offroad equipment, except for paving equipment as noted above.

---

[6] Letter from William Carson at Terraphase Engineering to Nick Pappas at Winehaven Legacy, LLC, dated August 26, 2019.

[7] Terraphase. 2019. DRAFT Phase 1 Environmental Site Assessment Former Point Molate Naval Fuel Depot. Richmond, Contra Costa County, California. Project Number 0351.001.001. August 29.

- Haul truck trips were calculated by CalEEMod® based on the amount of demolition and soil exported and imported during construction.[8] Soil quantities were provided by the Project Sponsor.
- Construction phase start dates were adjusted based on the schedule provided by the Project Sponsor (see Table 3). For emissions calculation purposes, Ramboll preserved the CalEEMod® emission estimates, and then assumed those emissions in each construction phase were evenly distributed across the phase lengths provided by the Project Sponsor in Table 3. This is discussed in more detail in the exposure section below.
- WWTP installation emissions were limited to 5 days of site preparation, grading, and building construction, based on information from the Project Sponsor. Per the Project Sponsor, WWTP installation will also require 50 haul truck trips, which have been included as well.

Modeled Emission Rates

Based on the construction schedule provided by the Project sponsor, each parcel of the Project may be completed and occupied in sequence, with residents being exposed to the remainder of construction of the other parcels. Residents of each parcel were evaluated separately to determine the maximum health impacts of construction, along with off-site residential receptors exposed to the entire construction period.

To maximize the evaluation of potential impacts to off-site residents, all construction activity related to demolition, parcel grading, and site preparation were modelled from Parcel A (the nearest parcel). Building construction, paving, and architectural coating activity was divided among the eight parcels based on the relative area of each parcel. Parcel areas and phase allocations are presented in Table 4. Monthly allocations of each construction phase are shown in the Gantt chart in Table 3.

For off-site receptors, all emissions from each building were summed by year and modeled on an annual basis. For on-site receptors, separate emission rates were calculated to represent only the emissions that occur during the potential exposure period. For example, as shown in Table 5, Parcel A will be occupied by residents in October 2024. After this time, construction emissions will occur at Parcels B through H. For modeling purposes, only the emissions from the construction of Parcels B through H were annualized and included in Parcel A exposure calculations. This same approach applies for each combination of Source and Receptor, only annualizing emissions that occur during the exposure period. The exposure periods and emission by parcel are shown in the expanded Gantt chart in Table 5. The annualized emission rates for each combination of source-receptor-year are presented in Table 6. The change in duration is addressed in the exposure parameter calculation, discussed below.

Air Dispersion Modelling

Ramboll analyzed Project construction-related risks by estimating ambient air concentrations of DPM and $PM_{2.5}$. To estimate air concentrations of DPM and $PM_{2.5}$, Ramboll used AERMOD, a steady-state Gaussian plume model developed by USEPA for regulatory applications. AERMOD requires emission source locations and release parameters, receptor locations, and processed meteorological data. The construction source parameters are shown in Table 7. Ramboll processed the five most recent years (2013, 2014, 2015, 2017, and 2018) of complete meteorological data from nearby stations with the USEPA's meteorological data preprocessor, AERMET. Input data sources include surface data from the Chevron Long Wharf meteorological observation station, upper air data from Oakland International

[8] While soil may be removed from the site via barge, emissions associated with off-haul are conservatively assumed to be completed by haul truck for this assessment.

Airport, and land cover data from the 1992 National Land Cover Data Set of the United states Geological Survey. A windrose of the five years of processed data is presented in Figure 2.

Emissions were modeled assuming construction only occurs daily from 7am – 7pm. The AERMOD input files are provided electronically as Appendix C. The model sources setup is presented in Figure 3, and the on-site and off-site residential receptors are shown in Figure 4.

Exposure Parameters and Cancer Risk Calculation

This analysis followed the recommended methodology from the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Hot Spots Guidance as adopted in the BAAQMD HRA Guidelines[9]. Ramboll conservatively evaluated Project impacts due to construction emissions using default exposure assumptions for a resident child from OEHHA. The resident child scenario assumes a much higher daily breathing rate and age-sensitivity factor (ASF)[10] than other sensitive receptor populations and therefore is the most conservative scenario to evaluate for this analysis. The exposure parameters used to estimate excess lifetime cancer risks for a resident child are presented in Table 8.

The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, IF_{inh}, can be calculated as follows:

$$IF_{inh} = \frac{DBR * FAH * EF * ED * CF * ASF * FY}{AT}$$

Where:

IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
DBR	=	Daily Breathing Rate (L/kg-day)
FAH	=	Fraction of Time at Home (unitless)
EF	=	Exposure Frequency (days/year)
ED	=	Exposure Duration (years)
CF	=	Conversion Factor, 0.001 (m^3/L)
ASF	=	Age Sensitivity Factor (unitless)
FY	=	Fraction of Year, to correct annualization of partial year emissions
AT	=	Averaging Time (days)

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in the OEHHA Hot Spots guidance (Cal/EPA 2003).

As discussed above, annual emission rates from each source were calculated differently for each type of receptor. For example, emissions from Parcel C in 2025 were calculated differently for impacts on Parcel A and Parcel B, depending on the number of months of exposure. Regardless of the number of months, emissions were annualized to be consistent with AERMOD annual dispersion factors. As such, all inhalation factors in Table 8 were calculated for 1-year exposure durations.

---

[9] BAAQMD. 2016. Proposed Health Risk Assessment Guidelines. Air Toxics NSR program. January. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en

[10] Ibid.

Within each year, a receptor may span multiple age bins. To account for this, the inhalation factor calculation above includes the "fraction of year" parameter. This represents the fraction of exposure within a year that occurs in each age bin. For example, in 2025, Parcel A receptors fall in the 0-2 age bin for the entire year, so FY for Parcel A in 2025 is 1. However, receptors in Parcel B are exposed during the 3rd Trimester and 0-2 bins in 2025. The 3rd Trimester exposure occurs in 3/8 months of the exposure period in that year, for an FY of 0.375. The FY for the 0-2 bin is then 5/8, or 0.625. The fractions are calculated based on the total number of months of exposure within a given year, not necessarily the entire calendar year. This is done to be consistent with the corresponding emission rates, which are annualized as described above.

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. This HRA evaluated theoretical exposures to TACs for two categories of potential adverse health effects, cancer and non-cancer endpoints. Toxicity values used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the toxicity assessment component of a risk assessment.

Excess lifetime cancer risk and chronic hazard quotient (HQs) calculations for Project construction utilized the toxicity values for DPM. Toxicity values for DPM (Cal/EPA 2016) are as presented in Table 9.

Cancer risk and chronic HI were calculated from ambient annual concentrations using intake factors, cancer potency factors, and chronic reference exposure levels calculated consistent with the 2015 OEHHA Hot Spots Guidance[11]. DPM does not have an associated acute HI reference exposure level, so acute HI impacts were not evaluated for the Project.

As shown in Table 10, the maximum cancer risk from construction activities is calculated to be 2.3 in 1 million, compared to a threshold of 10 in 1 million. Construction activities would also result in a non-cancer hazard index of 0.002 (threshold of 1.0), and maximum $PM_{2.5}$ concentration of 0.01 micrograms per cubic meter (µg/m^3) (threshold of 0.3 µg/m^3). The location of the maximally exposed individual resident (MEIR) is shown in Figure 5. These results are all below the BAAQMD thresholds of significance; thus, health risk impacts associated with construction of the Project are less than significant.

[11] Cal/EPA. 2015. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Attachments:

Tables

Figures

Appendix A: Sensitive Receptor Search Results

Appendix B: CalEEMod® Output Files

Appendix C: AERMOD Input Files (provided Electronically)

TABLES

Table 1
Land Uses (Residential Heavy)
Point Molate
Richmond, California

Scenario	Project Description Land Use Type	CalEEMod® Land Use Subtype	Unit Amount[1]	Size Metric	Square Footage	Acreage[2]
Project	Parking	Unenclosed Parking Structure	100	Space	40,000	0
	Recreational: City Park	City Park	30	Acre	1,306,800	30
	Recreational: Bay Trail Development	City Park	2.73	Acre	118,919	2.73
	Recreational: (Planning Area F-H): Quality Restaurant (historic building)	Quality Restaurant	10	1000sqft	10,000	0.12
	Recreational: (Planning Area F-H): Quality Restaurant (new)	Quality Restaurant	10	1000sqft	10,000	0.12
	Residential (Planning Area A-D): Low-Rise, medium density	Apartments Low Rise	286	Dwelling Unit	286,000	8.97
	Residential: (Planning Area F-H): Low-Rise, medium density (new)	Apartments Low Rise	350	Dwelling Unit	350,000	10.98
	Residential (Planning Area E): Mid-Rise, high density	Apartments Mid Rise	350	Dwelling Unit	350,000	4.62
	Residential: (Planning Area F-H): Mid-Rise, high density (historic building)	Apartments Mid Rise	473	Dwelling Unit	473,000	6.24
	Residential: (Planning Area F-H): Mid-Rise, high density (new)	Apartments Mid Rise	307	Dwelling Unit	307,000	4.05
	Residential: (Planning Area B-D): Single family units, medium density (new)	Single Family Housing	274	Dwelling Unit	493,200	44.65
	Terminal on existing pier (Defined as Convenience Market)	Convenience Market (24 Hour)	5	1000sqft	5,000	0
	Retail: (Planning Area F-H): Regional Shopping Center (historic building)	Regional Shopping Center	10	1000sqft	10,000	0.12
	Retail: (Planning Area F-H): Regional Shopping Center (new)	Regional Shopping Center	10	1000sqft	10,000	0.12
Existing	Structures to be demolished	Structures to be demolished	50	1000sqft	50,000	--

Notes:
1. Land use sizes provided by Project Sponsor.
2. Project acreages scaled to total 80 acres of residential, retail, and restaurant land uses, per Project Sponsor.

Abbreviations:
CalEEMod® - California Emissions Estimator Model®

Table 2
Project Construction Emissions
Point Molate
Richmond, California

Phase	Source	PM_{10} Emissions (tons)
Demolition	On-Site	2.40E-03
	Off-Site	2.00E-05
Site Preparation	On-Site	2.76E-03
	Off-Site	1.00E-05
Grading	On-Site	9.96E-02
	Off-Site	2.71E-03
Bay Trail Grading	On-Site	4.55E-02
	Off-Site	1.20E-04
Wastewater Treatment Plant	On-Site	0.00E+00
	Off-Site	0.00E+00
Building Construction	On-Site	3.16E-02
	Off-Site	3.12E-02
Paving	On-Site	3.55E-02
	Off-Site	1.00E-05
Architectural Coating	On-Site	1.74E-03
	Off-Site	3.10E-04
	Total	0.25

Notes:

1. Emissions calculated in CalEEMod® version 2016.3.2 based on the construction schedule provided by Project Sponsor. Emissions assume the use of all Tier 4 Final off-road equipment, except for paving equipment.

2. Off-site emissions were calculated for a one-way trip length of two miles, based on the modelled roadway from the Northern edge of the Project boundary to the freeway (See Figure 3).

Abbreviations:

CalEEMod® - California Emissions Estimator Model®

PM_{10} - particulate matter less than 10 microns

Table 3
Construction Activity Gantt Chart
Point Molate
Richmond, California

Phase	CalEEMod® Phas	Start	Finish	2021												2022												2023												2024											
				1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	10	#	#	1	2	3	4	5	6	7	8	9	#	#	#
Demolition	Demolition	Feb-21	Feb-23		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A																						
Site Prep	Site Preparation	Mar-21	Sep-22			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A																											
Grading	Grading	Apr-21	Apr-23				A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A																				
Building Construction	Building Construction	Jul-23	Nov-28																															A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B
Paving - Land Developer	Paving	Jan-22	Jul-23													A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A																	
Paving - Home Builder	Paving	Apr-23	May-28																												A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	C	C	C
Architectural Coating	Architectural Coating	Sep-23	Aug-28																																		A	A	A	A	A	A	A	A	A	A	A	A	B	B	B
Wastewater Treatment Plant	WWTP	Feb-23	Feb-23																																																
Grading - Bay Trail	Bay Trail Grading	Mar-22	Mar-23																																																

Notes:

1. Construction schedule provided by Project sponsor. Letters indicate which Parcel or other source (i.e. WWTP, Bay Trail) emissions are mapped to in Table 5.
2. Bay Trail Grading emissions were mapped to the Bay Trail as a series of volume sources. See Figure 3.
3. Wastewater treatment plant (WWTP) installation was assumed to occur before the first Parcel is occupied, per Project Sponsor.

Table 3
Construction Activity Gantt Chart
Point Molate
Richmond, California

Phase	calEEMod® Phas	Start	Finish	2025												2026												2027												2028												Count of Months
				1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	
Demolition	Demolition	Feb-21	Feb-23																																																	25
Site Prep	Site Preparation	Mar-21	Sep-22																																																	19
Grading	Grading	Apr-21	Apr-23																																																	25
Building Construction	Building Construction	Jul-23	Nov-28	B	B	C	C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	E	E	E	E	E	F	F	F	F	F	F	G	G	G	G	G	G	H	H	H	H	H	H	H	H	H	H	H	H		65
Paving - Land Developer	Paving	Jan-22	Jul-23																																																	19
Paving - Home Builder	Paving	Apr-23	May-28	C	C	C	C	C	C	C	C	D	D	D	D	E	E	E	E	E	F	F	F	F	F	F	G	G	G	G	G	G	H	H	H	H	H	H	H	H	H	H	H	H									62
Architectural Coating	Architectural Coating	Sep-23	Aug-28	B	B	B	B	C	C	C	C	C	C	C	C	C	C	C	D	D	D	E	E	E	E	E	F	F	F	F	F	F	G	G	G	G	G	G	H	H	H	H	H	H	H	H							59
Wastewater Treatment Plant	WWTP	Feb-23	Feb-23																																																	1
Grading - Bay Trail	Bay Trail Grading	Mar-22	Mar-23																																																	12

Notes:

1. Construction schedule provided by Project sponsor. Letters
2. Bay Trail Grading emissions were mapped to the Bay Trail
3. Wastewater treatment plant (WWTP) installation was assur

Table 4
Division of On-Site Construction Activity
Point Molate
Richmond, California

Parcel	Area (acres)	Percent of Total Area	Construction Months	Paving Months	Coating Months
Parcel A	18.8	20%	12	11	12
Parcel B	11.2	12%	8	7	7
Parcel C	17.3	18%	12	11	11
Parcel D	5.6	6%	4	4	3
Parcel E	7.6	8%	5	5	5
Parcel F	8.9	9%	6	6	5
Parcel G	8.8	9%	6	6	5
Parcel H	18.0	19%	12	12	11
Total	96.0	100%	65	62	59

[1.] Months per Parcel in each phase were rounded to the nearest whole number. Parcel A Construction and Paving were reduced by 1 month each to accommodate rounding errors in the total.

Table 5
Monthly Modeled Construction Diesel Particulate Matter (DPM) Emissions and Exposure Periods
Point Molate
Richmond, California

Phase	CalEEMod® Phase	Model Source	2021												2022												2023												2024											
			1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#	1	2	3	4	5	6	7	8	9	#	#	#
Demolition	Demolition	PARCELA																																																
Site Prep	Site Preparation	PARCELA																																																
Grading	Grading	PARCELA																																																
Building Construction	Building Construction	PARCELA																																																
Paving - Land Developer	Paving	PARCELA																																																
Paving - Home Builder	Paving	PARCELA																																																
Architectural Coating	Architectural Coating	PARCELA																																																
Building Construction	Building Construction	PARCELB																																																
Paving - Home Builder	Paving	PARCELB																																																
Architectural Coating	Architectural Coating	PARCELB																																																
Building Construction	Building Construction	PARCELC																																																
Paving - Home Builder	Paving	PARCELC																																																
Architectural Coating	Architectural Coating	PARCELC																																																
Building Construction	Building Construction	PARCELD																																																
Paving - Home Builder	Paving	PARCELD																																																
Architectural Coating	Architectural Coating	PARCELD																																																
Building Construction	Building Construction	PARCELE																																																
Paving - Home Builder	Paving	PARCELE																																																
Architectural Coating	Architectural Coating	PARCELE																																																
Building Construction	Building Construction	PARCELF																																																
Paving - Home Builder	Paving	PARCELF																																																
Architectural Coating	Architectural Coating	PARCELF																																																
Building Construction	Building Construction	PARCELG																																																
Paving - Home Builder	Paving	PARCELG																																																
Architectural Coating	Architectural Coating	PARCELG																																																
Building Construction	Building Construction	PARCELH																																																
Paving - Home Builder	Paving	PARCELH																																																
Architectural Coating	Architectural Coating	PARCELH																																																
WWTP	Installation	WWTP																																																
Grading - Bay Trail	Bay Trail Grading	TRAIL																																																
Demolition	Demolition	ROAD																																																
Site Prep	Site Preparation	ROAD																																																
Grading	Grading	ROAD																																																
Building Construction	Building Construction	ROAD																																																
Paving - Land Developer	Paving	ROAD																																																
Paving - Home Builder	Paving	ROAD																																																
Architectural Coating	Architectural Coating	ROAD																																																
WWTP	Installation	ROAD																																																
Grading - Bay Trail	Bay Trail Grading	ROAD																																																

Key:

- Monthly Emissions
- 3rd Trimester exposure period
- Age 0-2 exposure period
- Age 2-9 exposure period

Notes:

1. Whenever emissions occur in each row, they are equal to the "monthly emissions" column for that row.
2. Highlighting indicates exposure periods used in residential receptor cancer risk calculations. Off-site residents are assumed to be exposed to all construction emissions beginning in the 3rd trimester in utero. Each parcel is assumed to be occupied immediately after construction and exposed to all other emissions beginning in the next quarter.

Table 5
Monthly Modeled Construction Diesel Particulate Matte
Point Molate
Richmond, California

Phase	CalEEMod® Phase	Model Source	2025	2026	2027	2028	Monthly DPM Emissions (tons/month)	Total DPM Emissions (tons)
Demolition	Demolition	PARCELA					9.60E-05	2.40E-03
Site Prep	Site Preparation	PARCELA					1.45E-04	2.76E-03
Grading	Grading	PARCELA					3.98E-03	9.96E-02
Building Construction	Building Construction	PARCELA					4.86E-04	5.83E-03
Paving - Land Developer	Paving	PARCELA					4.38E-04	8.33E-03
Paving - Home Builder	Paving	PARCELA					4.38E-04	4.82E-03
Architectural Coating	Architectural Coating	PARCELA					2.95E-05	3.54E-04
Building Construction	Building Construction	PARCELB					4.86E-04	3.89E-03
Paving - Home Builder	Paving	PARCELB					4.38E-04	3.07E-03
Architectural Coating	Architectural Coating	PARCELB					2.95E-05	2.06E-04
Building Construction	Building Construction	PARCELC					4.86E-04	5.83E-03
Paving - Home Builder	Paving	PARCELC					4.38E-04	4.82E-03
Architectural Coating	Architectural Coating	PARCELC					2.95E-05	3.24E-04
Building Construction	Building Construction	PARCELD					4.86E-04	1.94E-03
Paving - Home Builder	Paving	PARCELD					4.38E-04	1.75E-03
Architectural Coating	Architectural Coating	PARCELD					2.95E-05	8.85E-05
Building Construction	Building Construction	PARCELE					4.86E-04	2.43E-03
Paving - Home Builder	Paving	PARCELE					4.38E-04	2.19E-03
Architectural Coating	Architectural Coating	PARCELE					2.95E-05	1.47E-04
Building Construction	Building Construction	PARCELF					4.86E-04	2.92E-03
Paving - Home Builder	Paving	PARCELF					4.38E-04	2.63E-03
Architectural Coating	Architectural Coating	PARCELF					2.95E-05	1.47E-04
Building Construction	Building Construction	PARCELG					4.86E-04	2.92E-03
Paving - Home Builder	Paving	PARCELG					4.38E-04	2.63E-03
Architectural Coating	Architectural Coating	PARCELG					2.95E-05	1.47E-04
Building Construction	Building Construction	PARCELH					4.86E-04	5.83E-03
Paving - Home Builder	Paving	PARCELH					4.38E-04	5.26E-03
Architectural Coating	Architectural Coating	PARCELH					2.95E-05	3.24E-04
WWTP	Installation	WWTP					5.00E-05	5.00E-05
Grading - Bay Trail	Bay Trail Grading	TRAIL					3.79E-03	4.55E-02
Demolition	Demolition	ROAD					8.00E-07	2.00E-05
Site Prep	Site Preparation	ROAD					5.26E-07	1.00E-05
Grading	Grading	ROAD					1.08E-04	2.71E-03
Building Construction	Building Construction	ROAD					4.80E-04	3.12E-02
Paving - Land Developer	Paving	ROAD					5.26E-07	1.00E-05
Paving - Home Builder	Paving	ROAD					1.61E-07	1.00E-05
Architectural Coating	Architectural Coating	ROAD					5.25E-06	3.10E-04
WWTP	Installation	ROAD					5.00E-05	5.00E-05
Grading - Bay Trail	Bay Trail Grading	ROAD					1.00E-05	1.20E-04

Key:

- Monthly Emissions
- 3rd Trimester exposure period
- Age 0-2 exposure period
- Age 2-9 exposure period

Notes:

1. Whenever emissions occur in each row, they are equal to the "mon
2. Highlighting indicates exposure periods used in residential receptor
utero. Each parcel is assumed to be occupied immediately after cor

Table 6
Modeled Emission Rates
Point Molate
Richmond, California

Receptor Type	Source	Year	Emissions (tons)	Emission Rate (g/s)
Offsite	ROAD	2021	9.90E-04	2.85E-05
Offsite	ROAD	2022	1.41E-03	4.06E-05
Offsite	ROAD	2023	3.42E-03	9.83E-05
Offsite	ROAD	2024	5.83E-03	1.68E-04
Offsite	ROAD	2025	5.83E-03	1.68E-04
Offsite	ROAD	2026	5.83E-03	1.68E-04
Offsite	ROAD	2027	5.83E-03	1.68E-04
Offsite	ROAD	2028	5.33E-03	1.53E-04
Offsite	PARCELA	2021	3.84E-02	1.10E-03
Offsite	PARCELA	2022	5.55E-02	1.60E-03
Offsite	PARCELA	2023	2.61E-02	7.52E-04
Offsite	PARCELA	2024	4.06E-03	1.17E-04
Offsite	PARCELB	2024	6.07E-03	1.75E-04
Offsite	PARCELB	2025	1.09E-03	3.14E-05
Offsite	PARCELC	2024	1.31E-03	3.78E-05
Offsite	PARCELC	2025	8.60E-03	2.47E-04
Offsite	PARCELC	2026	1.06E-03	3.05E-05
Offsite	PARCELD	2025	1.75E-03	5.04E-05
Offsite	PARCELD	2026	2.03E-03	5.85E-05
Offsite	PARCELE	2026	4.77E-03	1.37E-04
Offsite	PARCELF	2026	3.15E-03	9.05E-05
Offsite	PARCELF	2027	2.55E-03	7.33E-05
Offsite	PARCELG	2026	4.38E-04	1.26E-05
Offsite	PARCELG	2027	5.25E-03	1.51E-04
Offsite	PARCELH	2027	3.64E-03	1.05E-04
Offsite	PARCELH	2028	7.77E-03	2.24E-04
Offsite	TRAIL	2022	3.41E-02	9.82E-04
Offsite	TRAIL	2023	1.14E-02	3.27E-04
Offsite	WWTP	2023	5.00E-05	1.44E-06
PARCELA	ROAD	2024	1.46E-03	4.19E-05
PARCELA	ROAD	2025	5.83E-03	1.68E-04
PARCELA	ROAD	2026	5.83E-03	1.68E-04
PARCELA	ROAD	2027	5.83E-03	1.68E-04
PARCELA	ROAD	2028	5.33E-03	1.53E-04
PARCELA	PARCELB	2024	1.55E-03	4.45E-05
PARCELA	PARCELB	2025	1.09E-03	3.14E-05
PARCELA	PARCELC	2024	1.31E-03	3.78E-05
PARCELA	PARCELC	2025	8.60E-03	2.47E-04
PARCELA	PARCELC	2026	1.06E-03	3.05E-05
PARCELA	PARCELD	2025	1.75E-03	5.04E-05
PARCELA	PARCELD	2026	2.03E-03	5.85E-05
PARCELA	PARCELE	2026	4.77E-03	1.37E-04
PARCELA	PARCELF	2026	3.15E-03	9.05E-05
PARCELA	PARCELF	2027	2.55E-03	7.33E-05
PARCELA	PARCELG	2026	4.38E-04	1.26E-05
PARCELA	PARCELG	2027	5.25E-03	1.51E-04
PARCELA	PARCELH	2027	3.64E-03	1.05E-04
PARCELA	PARCELH	2028	7.77E-03	2.24E-04
PARCELB	ROAD	2025	3.89E-03	1.12E-04
PARCELB	ROAD	2026	5.83E-03	1.68E-04
PARCELB	ROAD	2027	5.83E-03	1.68E-04
PARCELB	ROAD	2028	5.33E-03	1.53E-04
PARCELB	PARCELC	2025	5.88E-03	1.69E-04
PARCELB	PARCELC	2026	1.06E-03	3.05E-05
PARCELB	PARCELD	2025	1.75E-03	5.04E-05

Table 6
Modeled Emission Rates
Point Molate
Richmond, California

Receptor Type	Source	Year	Emissions (tons)	Emission Rate (g/s)
PARCELB	PARCELD	2026	2.03E-03	5.85E-05
PARCELB	PARCELE	2026	4.77E-03	1.37E-04
PARCELB	PARCELF	2026	3.15E-03	9.05E-05
PARCELB	PARCELF	2027	2.55E-03	7.33E-05
PARCELB	PARCELG	2026	4.38E-04	1.26E-05
PARCELB	PARCELG	2027	5.25E-03	1.51E-04
PARCELB	PARCELH	2027	3.64E-03	1.05E-04
PARCELB	PARCELH	2028	7.77E-03	2.24E-04
PARCELC	ROAD	2026	4.37E-03	1.26E-04
PARCELC	ROAD	2027	5.83E-03	1.68E-04
PARCELC	ROAD	2028	5.33E-03	1.53E-04
PARCELC	PARCELD	2026	1.55E-03	4.45E-05
PARCELC	PARCELE	2026	3.45E-03	9.94E-05
PARCELC	PARCELF	2026	3.15E-03	9.05E-05
PARCELC	PARCELF	2027	2.55E-03	7.33E-05
PARCELC	PARCELG	2026	4.38E-04	1.26E-05
PARCELC	PARCELG	2027	5.25E-03	1.51E-04
PARCELC	PARCELH	2027	3.64E-03	1.05E-04
PARCELC	PARCELH	2028	7.77E-03	2.24E-04
PARCELD	ROAD	2026	2.91E-03	8.38E-05
PARCELD	ROAD	2027	5.83E-03	1.68E-04
PARCELD	ROAD	2028	5.33E-03	1.53E-04
PARCELD	PARCELE	2026	2.58E-03	7.41E-05
PARCELD	PARCELF	2026	2.71E-03	7.79E-05
PARCELD	PARCELF	2027	2.55E-03	7.33E-05
PARCELD	PARCELG	2026	4.38E-04	1.26E-05
PARCELD	PARCELG	2027	5.25E-03	1.51E-04
PARCELD	PARCELH	2027	3.64E-03	1.05E-04
PARCELD	PARCELH	2028	7.77E-03	2.24E-04
PARCELE	ROAD	2026	4.86E-04	1.40E-05
PARCELE	ROAD	2027	5.83E-03	1.68E-04
PARCELE	ROAD	2028	5.33E-03	1.53E-04
PARCELE	PARCELF	2026	5.15E-04	1.48E-05
PARCELE	PARCELF	2027	2.55E-03	7.33E-05
PARCELE	PARCELG	2026	4.38E-04	1.26E-05
PARCELE	PARCELG	2027	5.25E-03	1.51E-04
PARCELE	PARCELH	2027	3.64E-03	1.05E-04
PARCELE	PARCELH	2028	7.77E-03	2.24E-04
PARCELF	ROAD	2027	3.40E-03	9.78E-05
PARCELF	ROAD	2028	5.33E-03	1.53E-04
PARCELF	PARCELG	2027	3.03E-03	8.73E-05
PARCELF	PARCELH	2027	3.64E-03	1.05E-04
PARCELF	PARCELH	2028	7.77E-03	2.24E-04
PARCELG	ROAD	2027	4.86E-04	1.40E-05
PARCELG	ROAD	2028	5.33E-03	1.53E-04
PARCELG	PARCELH	2027	9.54E-04	2.74E-05
PARCELG	PARCELH	2028	7.77E-03	2.24E-04

Notes:

1. Annual emissions summed by year for each souce-receptor combination from Table 5. Each row represents the total emissions that "Receptor Type" is exposed to from "Source" in "Year".
2. Emission rates in grams per second calculated as continuous over 8,760 hours per year and 3,600 seconds per hour.

Abbreviations:

g/s - grams per second

Table 7
Modeling Source Parameters
Point Molate
Richmond, California

Source	Source Type	Release Height[1]	Initial Vertical Dimension[2]	Initial Lateral Dimension[3]	Number of Sources	Area[4,5]
		m	[unitless]	[unitless]	--	m^2
Parcel A	Polygon Area	5.00	1.16	--	1	85,249
Parcel B	Polygon Area	5.00	1.16	--	1	54,586
Parcel C	Polygon Area	5.00	1.16	--	1	75,110
Parcel D	Polygon Area	5.00	1.16	--	1	32,623
Parcel E	Polygon Area	5.00	1.16	--	1	31,557
Parcel F	Polygon Area	5.00	1.16	--	1	40,371
Parcel G	Polygon Area	5.00	1.16	--	1	44,204
Parcel H	Polygon Area	5.00	1.16	--	1	119,091
WWTP	Polygon Area	5.00	1.16	--	1	498
Bay Trail	Adjacent Volumes	5.00	1.40	1.42	781	--
Road	Adjacent Volumes	4.57	1.06	7.44	198	--

Notes:

1. Area source and Bay Trail release height assumed to be 5 m, consistent with the San Francisco Community Risk Reduction Plan-Health Risk Assessment. On-road release height based on BAAQMD HRA modeling guidance.
2. Initial Vertical Dimension for area sources and on-road sources set to [release height]/4.3, per the AERMOD User's Guide. Bay Trail Initial Vertical Dimension set to 1.4 based on the SCAQMD Localized Significance Threshold (LST) guidance for modeling construction as adjacent volume sources.
3. Initial lateral dimensions calculated as the width of the trail (10 feet) divided by 2.15, per the AERMOD User's Guide, and the width of the road (10 meters) plus a 6 meter mixing zone, per USEPA Haul Road Guidance.
4. Modeled emission rates are 1/[Area] to generate unit dispersion factors for area sources, and 1/[number of sources] for volume sources.
5. The complete AERMOD input file can be found in Appendix C.

Abbreviations:

BAAQMD - Bay Area Air Quality Management District

m - meter

SCAQMD - South Coast Air Quality Management District

USEPA - United States Environmental Protection Agency

Reference:

Bay Area Air Quality Management District (BAAQMD). 2010. Health Risk Assessments & Land Use. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-hra-guidelines-statewide-workshops-4-28-10.pdf

Bay Area Air Quality Management District (BAAQMD). 2012. The San Francisco Community Risk Reduction Plan: Technical Support Documentation. December. Available at: http://www.gsweventcenter.com/Draft_SEIR_References%5C2012_12_BAAQMD_SF_CRRP_Methods_and_Findings_v9.pdf

SCAQMD. 2008. Final Localized Significance Threshold Methodology. July. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

USEPA. 2019. User's Guide for the AMS/EPA Regulatory Model (AERMOD). August. Available at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf

Table 8
Cancer Risk Exposure Parameters
Point Molate
Richmond, California

Receptor Type	Year	Age Group	Fraction of Year (FY)[1]	Daily Breathing Rate (DBR)[2]	Exposure Duration (ED)[3]	Fraction of Time at Home (FAH)[4]	Exposure Frequency (EF)[5]	Age Sensitivity Factor (ASF)[6]	Averaging Time (AT)	Intake Factor, Inhalation (IF_{inh})[7]
				[L/kg-day]	[years]	[unitless]	[days/year]		[days]	[m^3/kg-day]
Offsite	2021	3rd trimester	0.272727	361	1.00	1.0	350	10	25,550	0.0135
Offsite	2021	0-2	0.727273	1,090	1.00	1.0	350	10	25,550	0.1086
Offsite	2022	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
Offsite	2023	0-2	0.333333	1,090	1.00	1.0	350	10	25,550	0.0498
Offsite	2023	2-9	0.666667	572	1.00	1.0	350	3	25,550	0.0157
Offsite	2024	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
Offsite	2025	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
Offsite	2026	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
Offsite	2027	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
Offsite	2028	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
PARCELA	2024	3rd trimester	1	361	1.00	1.0	350	10	25,550	0.0495
PARCELA	2025	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELA	2026	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELA	2027	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
PARCELA	2028	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
PARCELB	2025	3rd trimester	0.375	361	1.00	1.0	350	10	25,550	0.0185
PARCELB	2025	0-2	0.625	1,090	1.00	1.0	350	10	25,550	0.0933
PARCELB	2026	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELB	2027	0-2	0.583333	1,090	1.00	1.0	350	10	25,550	0.0871
PARCELB	2027	2-9	0.416667	572	1.00	1.0	350	3	25,550	0.0098
PARCELB	2028	2-9	1	572	1.00	1.0	350	3	25,550	0.0235
PARCELC	2026	3rd trimester	0.333333	361	1.00	1.0	350	10	25,550	0.0165
PARCELC	2026	0-2	0.666667	1,090	1.00	1.0	350	10	25,550	0.0995
PARCELC	2027	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELC	2028	0-2	0.545455	1,090	1.00	1.0	350	10	25,550	0.0814
PARCELC	2028	2-9	0.454545	572	1.00	1.0	350	3	25,550	0.0107
PARCELD	2026	3rd trimester	0.5	361	1.00	1.0	350	10	25,550	0.0247
PARCELD	2026	0-2	0.5	1,090	1.00	1.0	350	10	25,550	0.0747
PARCELD	2027	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELD	2028	0-2	0.818182	1,090	1.00	1.0	350	10	25,550	0.1222
PARCELD	2028	2-9	0.181818	572	1.00	1.0	350	3	25,550	0.0043
PARCELE	2026	3rd trimester	1	361	1.00	1.0	350	10	25,550	0.0495
PARCELE	2027	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELE	2028	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELF	2027	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELF	2028	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELG	2027	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493
PARCELG	2028	0-2	1	1,090	1.00	1.0	350	10	25,550	0.1493

Notes:

1. Fraction of year represents the portion of the exposure time within a year that the age bin occupies for the specific receptor type, based on the color coding in Table 5. For example, Parcel A exposure begins in the October 2024. The 3rd Trimester age bin occupies the entire exposure period for Parcel A in 2024, so the Fraction of Year is set to 1. All construction emissions that occur in the 4th Quarter of 2024 are annualized for Parcel A exposure.
2. Daily breathing rates reflect default breathing rates from OEHHA 2015 and BAAQMD 2016 as follows: 95th percentile 24-hour daily breathing rate for 3rd trimester and age 0-<2 years and 80th percentile 24-hour daily breathing rate for ages 2-<9 (per BAAQMD 2016 guidance).
3. Exposure durations are all set to 1 year as emissions for each exposure scenario are calculated separately and annualized to one year.
4. Fraction of time spent at home is conservatively assumed to be 1 (i.e. 24 hours/day) based on the recommendation from BAAQMD (BAAQMD 2016) and OEHHA (OEHHA 2015).
5. Exposure frequency reflects default residential exposure frequency from OEHHA 2015.
6. Based on OEHHA 2015. Age sensitivity factors are unitless.
7. Inhalation Factors calculated via the equation below:

Calculation:

IF_{inh} = FY * DBR * FAH * EF * ED * ASF * CF / AT

CF = 0.001 (m^3/L)

Abbreviations:

ASF - age sensitivity factor
AT - averaging time
BAAQMD - Bay Area Air Quality Managem
DBR - daily breathing rate
ED - exposure duration
EF - exposure frequency
FAH - fraction of time at home
IF_{inh} - intake factor
kg - kilogram
L - liter
m^3 - cubic meter
OEHHA - Office of Environmental Health Hazard Assessment

Reference:

BAAQMD. 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. January.
OEHHA. 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk

Table 9
Toxicity Values
Point Molate
Richmond, California

Chemical[1]	Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$	Chronic REL ($\mu g/m^3$)
Diesel PM	1.1	5.0

Notes:

1. Chemicals presented in this table reflect air toxic contaminants in the proposed fuel types that are expected from off-road equipment and on-road truck trips.

Abbreviations:

$\mu g/m^3$ - micrograms per cubic meter
ARB - Air Resources Board
Cal/EPA - California Environmental Protection Agency
$(mg/kg\text{-}day)^{-1}$ - per milligram per kilogram-day
OEHHA - Office of Environmental Health Hazard Assessment
PM - particulate matter
REL - reference exposure level

Reference:

Cal/EPA. 2015. OEHHA/ARB Consolidated Table of Approved Risk Assessment Health Values. May 13.

Table 10
Construction HRA Results Summary
Point Molate
Richmond, California

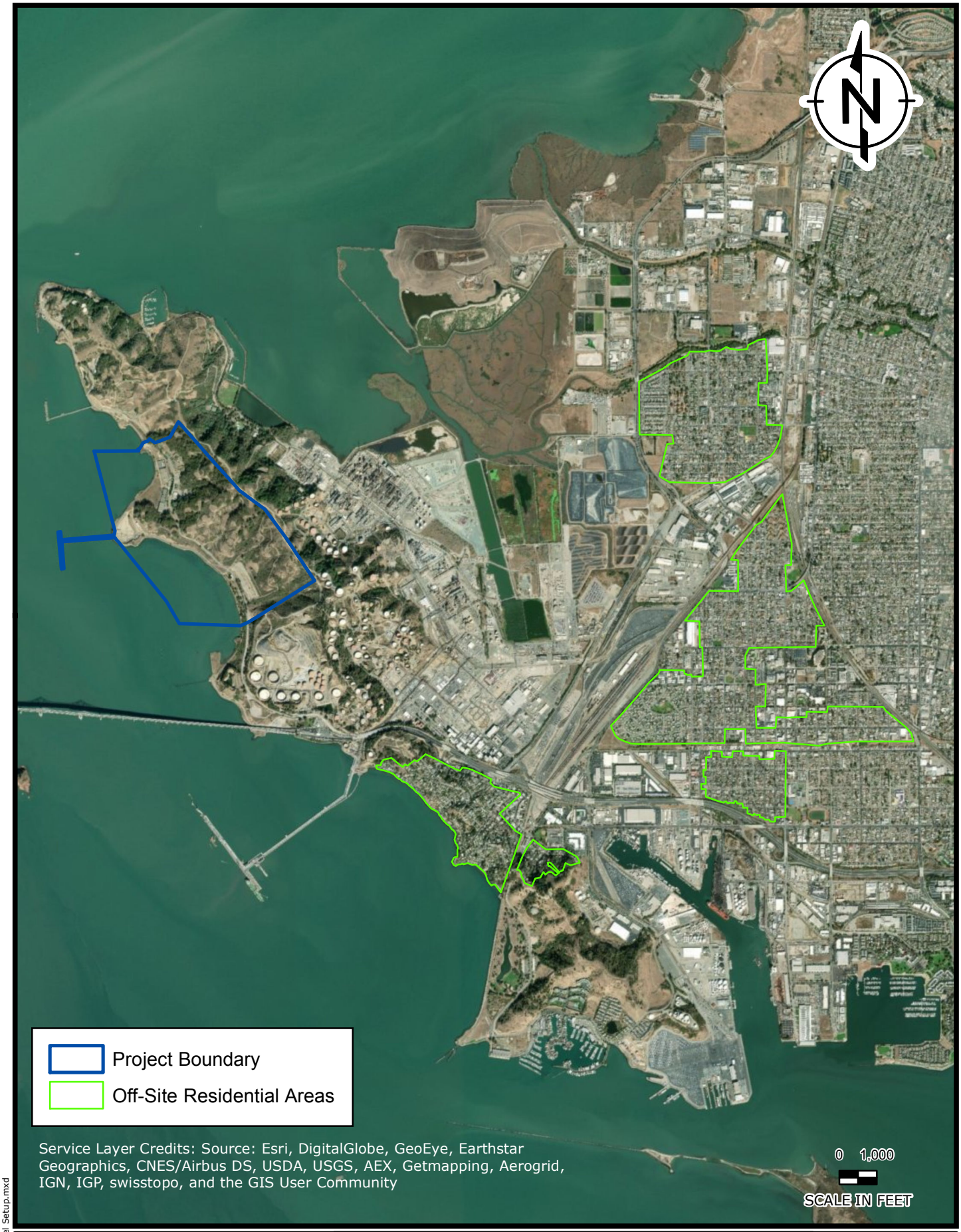
Receptor Type	Max Cancer Risk (in a million)	Max $PM_{2.5}$ Concentration ($\mu g/m^3$)	Max Chronic HI (unitless)
Offsite	0.5	0.002	0.0004
Onsite - Parcel A	2.2	0.006	0.001
Onsite - Parcel B	2.0	0.005	0.001
Onsite - Parcel C	2.0	0.005	0.001
Onsite - Parcel D	0.9	0.003	0.0005
Onsite - Parcel E	0.5	0.002	0.0003
Onsite - Parcel F	2.3	0.008	0.002
Onsite - Parcel G	1.7	0.010	0.002
Construction Risk at MEIR	2.3	0.010	0.002
BAAQMD Threshold	10	0.3	1
Exceeds Threshold?	No	No	No

Abbreviations:

MEIR - Maximally Exposed Individual Resident

$\mu g/m^3$ - Micrograms per cubic meter

FIGURES



U:\Point Molate\GIS\Model Setup.mxd

RAMBOLL

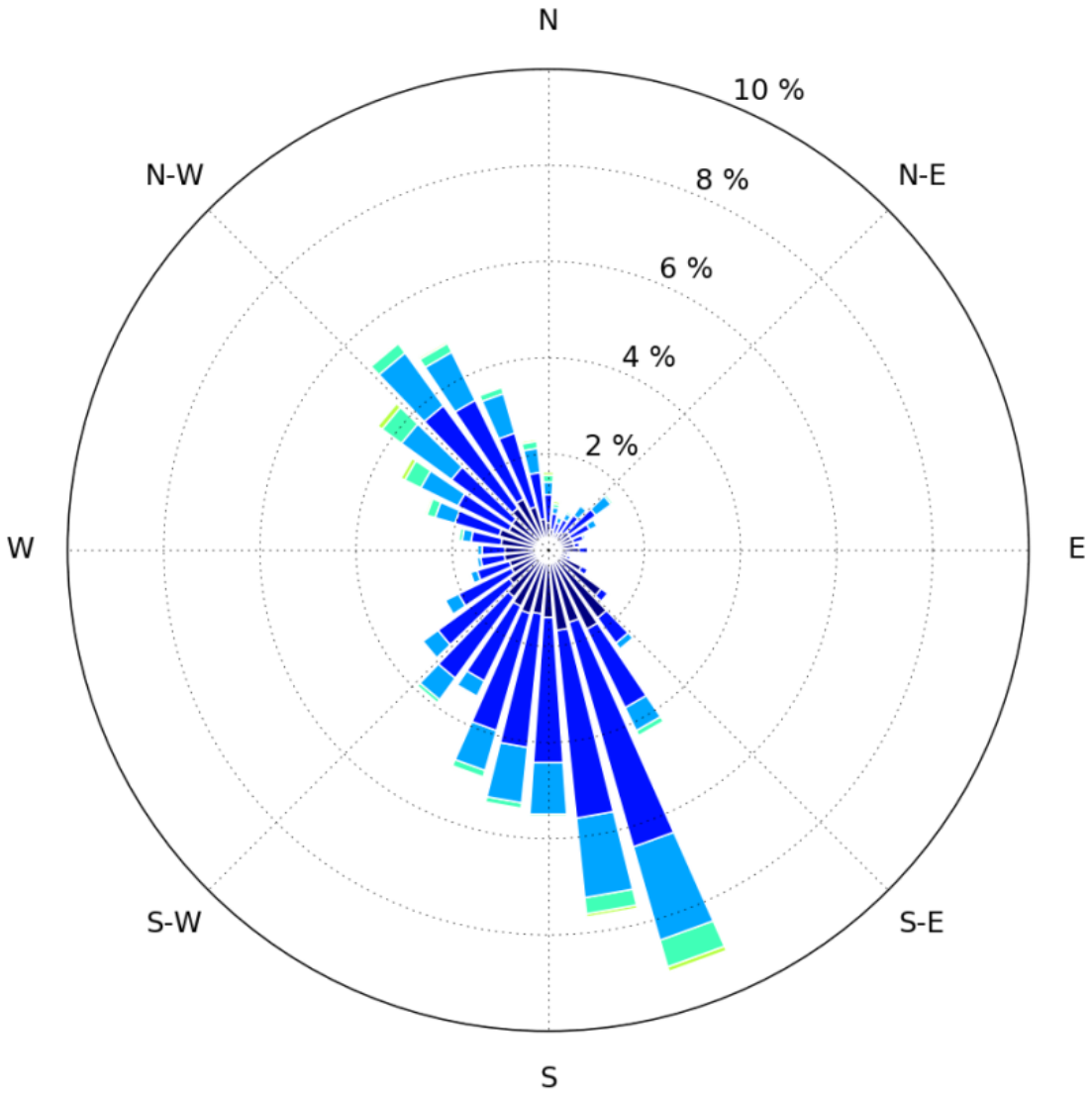
DRAFTED BY: MJH | DATE: 9/6/2019

Project Location

Point Molate
Richmond, California

FIGURE
1

PROJECT: 1690014031-



Wind speed (m/s)

- 0.5 to 2.0 m/s
- 2.0 to 4.0 m/s
- 4.0 to 6.0 m/s
- 6.0 to 8.0 m/s
- 8.0 to 10.0 m/s
- 10.0 to 12.0 m/s
- 12.0 m/s +

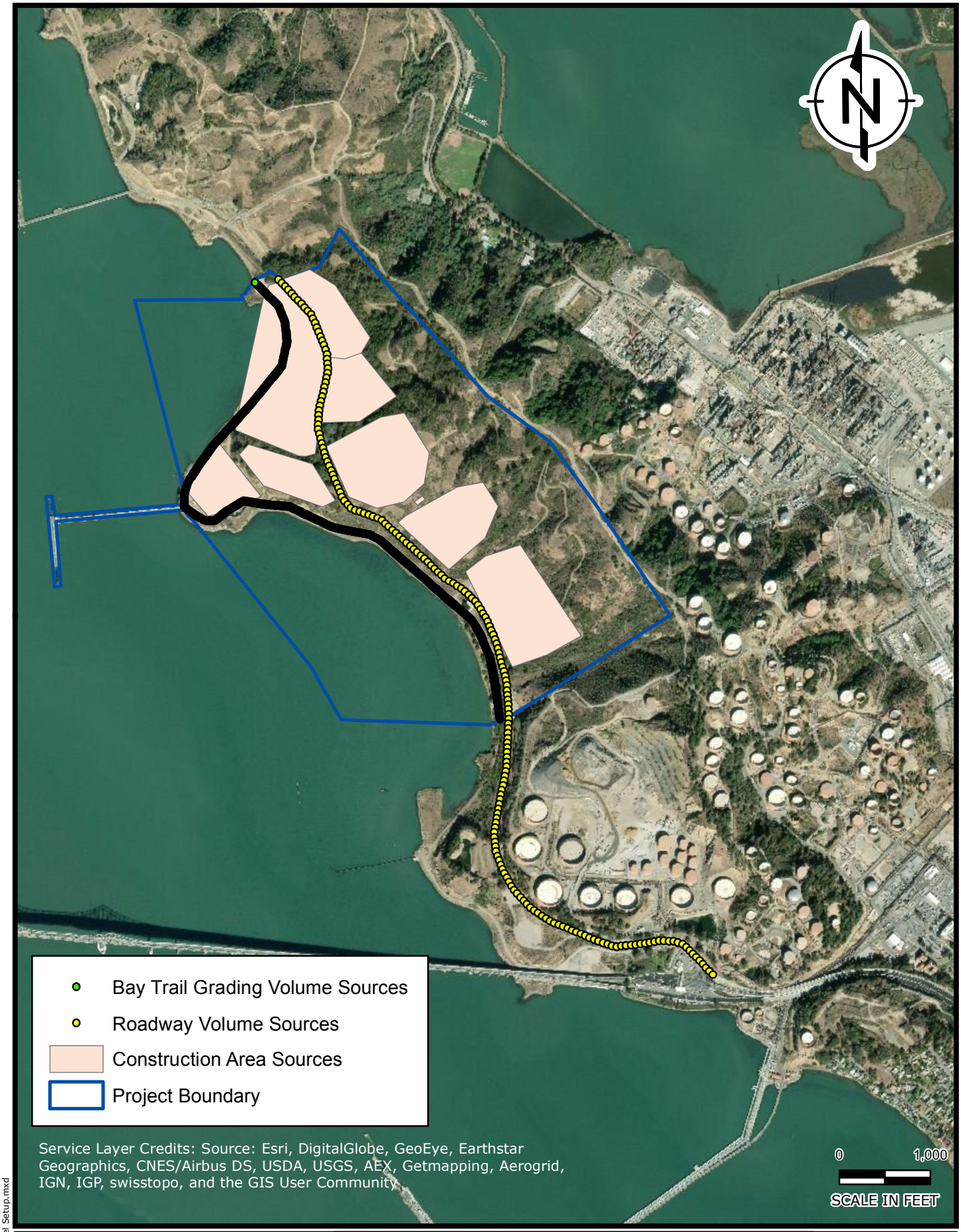
```
Dataset information:
(wind speed in m/s)

 43800 total count
    70 total calm
   0.2 % calm
     0 missing
   0.0 % missing
   2.9 wind speed avg.
   0.5 min. wind speed
  17.6 max. wind speed
```

RAMBOLL

Windrose for Chevron Long Wharf
Point Molate
Richmond, California

FIGURE
2

DRAFTED BY: MJH | DATE: 09/17/19 | PROJECT: 1690014031-003



U:\Point Molate\GIS\Model Setup.mxd

RAMBOLL

DRAFTED BY: MJH

DATE: 9/6/2019

AERMOD Model Setup - Source Locations

Point Molate

Richmond, California

FIGURE

3

PROJECT: 1690014031-

U:\Point Molate\GIS\Model Setup.mxd

RAMBOLL

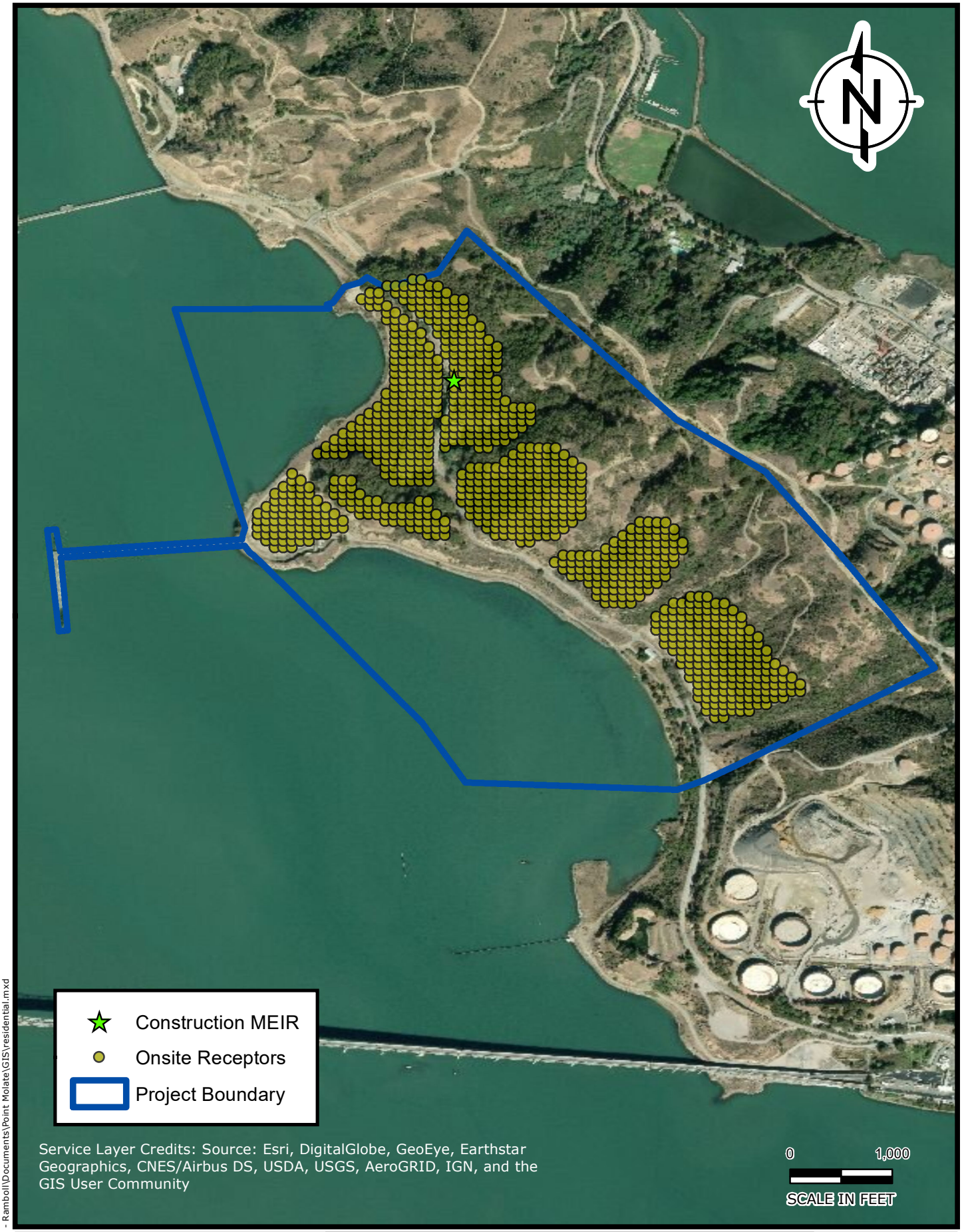
DRAFTED BY: MJH | DATE: 9/6/2019

AERMOD Model Setup - Receptor Locations

Point Molate
Richmond, California

FIGURE 4

PROJECT: 1690014031-



C:\Users\lkunik\OneDrive - Ramboll\Documents\Point Molate\GIS\residential.mxd

RAMBOLL

DRAFTED BY: LTK | DATE: 9/20/2019

Maximum Exposed Individual Receptor (MEIR) from Project Construction

Point Molate,
Richmond, CA

FIGURE
5

PROJECT: 1690014031-

APPENDIX A

SENSITIVE RECEPTOR SEARCH RESULTS

Point Molate
2100 Stenmark Dr
Richmond, CA 94801

Inquiry Number: 5744904.1s
August 07, 2019

EDR Offsite Receptor Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

OPERATIONAL HRA

ENVIRONMENT
& HEALTH

MEMO

Date: February 14, 2020

To: Bibiana Alvarez, Project Manager, Analytical Environmental Services

From: Shari Beth Libicki, PhD

Taylor Vencill, PE

Subject: OPERATIONAL HEALTH RISK ASSESSMENT FOR THE DEVELOPMENT AT POINT MOLATE, RICHMOND, CALIFORNIA

Ramboll
201 California Street
Suite 201
San Francisco, CA 94111
USA

T +1 415 796 1950
F +1 415 398 5812
www.ramboll.com

Ramboll US Corporation (Ramboll) conducted an operational Health Risk Assessment (HRA) for the proposed Project at Point Molate in Richmond, California ("the Project"). This memo summarizes the methods and assumptions used in the HRA, and qualitatively discusses the elements which will be further addressed during permitting.

BACKGROUND

The Project consists of eight parcels of mixed-use development, where two scenarios are being considered, one residential heavy option and one commercial heavy option. Additionally, a potential onsite waste water treatment plant (WWTP) may be included as part of the Project. For purposes of this Operational HRA, the residential heavy option is conservatively used for estimated traffic volume, as it is higher than the traffic volume estimated for the commercial heavy option.

Potential sources of toxic air contaminants (TACs) due to the Project which are discussed below include: (1) Project-generated traffic (2) Ferry operations (3) Emergency generators, and (4) WWTP operations.

THRESHOLDS OF SIGNIFICANCE

The City of Richmond is the lead agency responsible for Project approval. Per City of Richmond requirements, Ramboll evaluated the Project in accordance with the current Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines, which were updated in May 2017.[1] These guidelines present methods for evaluating compliance with CEQA as well as thresholds for determining significance. With respect to the operational HRA, the BAAQMD thresholds of significance are as follows:

- Increased cancer risk of >10.0 in a million

[1] BAAQMD. 2017. California Environmental Quality Act (CEQA) Air Quality Guidelines. May. Available online at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

- Increased non-cancer risk of > 1.0 HI (chronic or acute)
- Ambient $PM_{2.5}$ increase: > 0.3 µg/m^3 annual average

Ramboll evaluated each of these thresholds for both the maximum potential onsite sensitive receptor, and the maximum potential offsite sensitive receptor.

TRAFFIC IMPACTS

The Project-generated traffic could result in increased cancer risk and $PM_{2.5}$ concentrations at the residences nearest to the roadways where the traffic is added. To evaluate potential health risk impacts for traffic generated by the Project, Ramboll used the BAAQMD Roadway Screening Analysis Calculator (BAAQMD, 2015).[2] Input parameters to the BAAQMD screening tool include Annual Average Daily Traffic (AADT), roadway direction, and distance of the Maximally Exposed Individual Resident (MEIR) to the edge of the roadway. Resulting cancer risks were multiplied by a factor of 1.3744 to account for the revised 2015 OEHHA Guidance, at the direction of the BAAQMD.[3] The BAAQMD's screening tools do not estimate chronic or acute hazards since the screening levels were found to be extremely low, and thus there are no chronic or acute hazard values associated with roadways.

For potential onsite impacts, the AADT generated by the Project is about 10,980 (residential heavy option)[4] and is assumed to all travel through Stenmark Drive which runs in a North-South direction along the Project. The MEIR is assumed to be 20 feet from the edge of the roadway (on the Eastern side), based on the shortest distance to existing buildings.

For potential offsite impacts, the nearest offsite sensitive receptor to the roadway was evaluated, as shown in Figure 1. Risks from project operational traffic assume 49% of total project traffic (10,980 AADT) to be allocated to Highway 580 (41% for Highway 580 volume and 8% for nearby local traffic), based on the Project's Transportation Impact Analysis. Highway 580 travels in the East-West direction, with the off-site MEIR located 100 feet to the South.

Potential risks from Project traffic are summarized in Table 1. As shown in Table 1, potential risks from Project-generated traffic are below BAAQMD significance thresholds.

FERRY OPERATIONS

Ramboll understands that part of the Project includes refurbishing an existing ferry terminal, for use by residents or visitors of the Project. Project ferry operations are expected to include up to four daily ferry trips servicing Point Molate to the SF Ferry Terminal. Potential emissions include diesel particulate matter (DPM) from both idling and transit. Diesel exhaust, a complex mixture that includes hundreds of individual constituents, is identified by the State of California as a known carcinogen (California Environmental Protection Agency [Cal/EPA] 1998).[5] Under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole.

---

[2] BAAQMD. 2015. Roadway Screening Analysis Calculator. Contra Costa County. Available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

[3] Personal communication between Shari Beth Libicki (Ramboll) and Virginia Lau (Bay Area Air Quality Management District), February 3rd, 2016.

[4] AADT considers the average over weekday and weekend travel.

[5] California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA). 1998. Findings of the Scientific Review Panel on The Report on Diesel Exhaust, as adopted at the Panel's April 22, 1998, meeting.

As the end of the pier is more than 1,000 feet from any offsite or proposed onsite residents, potential impacts due to ferry emissions are not quantified here, consistent with the 1,000 foot zone of influence outlined in the BAAQMD CEQA Guidelines (BAAQMD, 2017).[1]

EMERGENCY GENERATORS

Ramboll understands Project operations may contain up to two diesel-fired, 2000 kW (2,682 HP), Tier 4 emergency generators to support large residential or commercial centers. Any new diesel-fired emergency generator with a rated power of 50 horsepower or more is required to obtain a permit from the BAAQMD. In accordance with BAAQMD Regulations 2-1[6] and 2-5[7], new sources of emissions must implement Best Available Control Technology for Toxics (T-BACT) if individual source risks exceed 1.0 in a million for cancer and/or chronic hazard index is greater than 0.20.

Additionally, a permit will be denied if project cancer risk exceeds 10.0 in a million or if chronic or acute hazard index exceeds 1.0. Compliance with BAAQMD rules will ensure that new emergency generators will not result in a significant impact.

WASTE WATER TREATMENT PLANT

Ramboll understands Project operations may contain an onsite waste water treatment plant (WWTP). The WWTP would also include a 2,000 kW (2,682 HP) diesel-fired emergency generator to support operations during a power outage. WWTP operations along with the emergency generator may emit TACs such as diesel particulate matter, benzene, and toluene. Each process unit, including supporting equipment (e.g. emergency diesel generators, tanks), at waste water treatment facilities are required to obtain permits with the BAAQMD. In accordance with Regulations 2-1 and 2-5, new sources of emissions must implement T-BACT if individual source risks exceed 1.0 in a million for cancer and/or chronic hazard index greater than 0.20.

Additionally, a permit will be denied if project cancer risk exceeds 10.0 in a million or if chronic or acute hazard index exceeds 1.0. Compliance with BAAQMD rules will ensure that the installation and operation of a WWTP will not result in a significant impact.

Attachments:

Tables

Figures

[6] BAAQMD Regulation 2 Permits Rule 1 General Requirements. December 2018. Available at: http://www.baaqmd.gov/~/media/dotgov/files/rules/regulation-2-rule-1/documents/20171206_fr_0201-pdf.pdf?la=en

[7] BAAQMD Regulation 2 Permits Rule 5. New Source Review of Toxic Air Contaminants. December 2016. Available at: http://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-rule-5-new-source-review-of-toxic-air-contaminants/documents/rg0205_120716-pdf.pdf?la=en

TABLES

Table 1
Operational Health Risk Impacts
Point Molate
Richmond, California

Source Type	Sources	Receptor	Cancer Risk (in a million)	Chronic Hazard Index (HI) [4]	Acute Hazard Index (HI) [4]	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Roadways[1]	Project Traffic	On-site MEIR[2]	6.4	--	--	0.12
		Off-site MEIR[3]	1.4	--	--	0.03
BAAQMD Significance Threshold			10.0	1.0	1.0	0.30
Exceed?			No	--	--	No

Notes:

1. Operational health risk impacts due to Project traffic are estimated using BAAQMD Screening Tools. The BAAQMD roadways screening calculator is used to estimate impacts. Cancer risk was multiplied by a factor of 1.3744 to account for the revised 2015 OEHHA Guidance, at the direction of the BAAQMD.

2. Input parameters to the BAAQMD screening tool include Annual Average Daily Traffic (AADT), roadway direction and distance of the onsite Maximally Exposed Individual Resident (MEIR) to the edge of the roadway. The AADT generated by the Project is about 10,980 (averaged over weekday and weekend travel) and is assumed to travel through Stenmark Drive which runs in a North-South direction along the Project. The MEIR is assumed to be 20 feet from the edge of the roadway (on the Eastern side), based on the shortest distance to existing buildings.

3. Input parameters to the BAAQMD screening tool include AADT, roadway direction and distance of the offsite MEIR to the edge of the roadway. Risks from project operational traffic assume 49% of total project traffic (10,980 AADT) to be allocated to Highway 580 (41% for Highway volume and 8% for nearby local traffic), based on the Project's Transportation Impact Analysis. Highway 580 travels in the East-West direction, with the off-site MEIR located 100 feet to the South.

4. The BAAQMD's screening tools do not estimate chronic or acute hazards since the screening levels were found to be extremely low, and thus there are no chronic or acute hazard values associated with roadways.

Abbreviations:

µg - microgram
AADT - Annual Average Daily Traffic
BAAQMD - Bay Area Air Quality Management District
HI - Hazard Index
OEHHA - Office of Environmental Health Hazard Assessment
m - meter
m^3 - cubic meter
MEIR - Maximally Exposed Individual Resident
$PM_{2.5}$ - fine particulate matter

Sources:

BAAQMD. 2015. Roadway Screening Analysis Calculator. Contra Costa County. Available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools

FIGURES

RAMBOLL

DRAFTED BY: MJH | DATE: 9/24/2019

Off-Site Maximum Exposed Individual Sensitive Receptor (MEISR) Location

Point Molate

Richmond, California

FIGURE

1

PROJECT: 1690014031-

\\ENV-SF-FILE1\public\Air\Point Molate\GIS\Figure 1.mxd

FERRY HRA

ENVIRONMENT
& HEALTH

MEMO

Date: February 14, 2020

To: Bibiana Alvarez, Project Manager, Analytical Environmental Services

From: Shari Beth Libicki, PhD

Taylor Vencill, MS, PE

Subject: HEALTH RISK ASSESSMENT FOR PROPOSED FERRY OPERATIONS AT POINT MOLATE, RICHMOND, CALIFORNIA

Ramboll
201 California Street
Suite 201
San Francisco, CA 94111
USA

T +1 415 796 1950
F +1 415 398 5812
www.ramboll.com

Ramboll US Corporation (Ramboll) conducted a Health Risk Assessment (HRA) for the proposed ferry operations as part of the Project at Point Molate in Richmond, California ("the Project"). This memo details the methods and assumptions used in the HRA, including emissions estimation and dispersion modelling.

Ramboll understands that the Project consists of mixed-use development, as well as a potential onsite waste water treatment plant, grading of the San Francisco Bay Trail, and reconfiguration of the Point Molate pier to service a new ferry route and terminal. Ramboll also understands that the proposed ferry route will connect the San Francisco Ferry Building and the new Point Molate terminal, including up to four daily ferry trips with berthing visits on both sides.

THRESHOLDS OF SIGNIFICANCE

The City of Richmond is the lead agency responsible for Project approval. Per City of Richmond requirements, Ramboll evaluated the Project in accordance with the current Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines, which were updated in May 2017.[1] These guidelines present methods for evaluating compliance with CEQA as well as thresholds for determining significance. With respect to the ferry HRA, the BAAQMD thresholds of significance are as follows:

- Increased cancer risk of >10.0 in a million
- Increased non-cancer risk of > 1.0 HI (chronic or acute)
- Ambient $PM_{2.5}$ increase: > 0.3 µg/m^3 annual average

Ramboll evaluated each of these thresholds for on-site sensitive receptors, assuming all eight parcels may include residential land uses, as well as the nearest off-site residential areas on both the Richmond and San Francisco sides of the ferry

[1] BAAQMD. 2017. California Environmental Quality Act (CEQA) Air Quality Guidelines. May. Available online at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

route. No other sensitive receptors were identified in the Project vicinity (see Appendix A); however, a school was identified within 1000 feet of the San Francisco ferry building[2], and was evaluated as a sensitive receptor in this analysis.

FERRY OPERATIONAL EMISSIONS

The following sections describe the input data and methodologies used in the ferry HRA. Detailed information for each section can be found in the referenced tables and appendices.

Toxic Air Contaminant (TAC) Emissions

The TAC emissions associated with the Project construction were calculated with the following assumptions:

1. Diesel Particulate Matter (DPM): DPM emissions were used to evaluate the cancer risk and non-cancer chronic HI from ferry operation. In this analysis, total Particulate Matter (PM) exhaust emissions were assumed as DPM and modeled on the proposed ferry route connecting San Francisco to the Point Molate pier. DPM emissions were also modeled for idling engine conditions at berthing locations for both San Francisco and Point Molate terminals. Proposed ferry engines were assumed to be certified Tier 2.
2. $PM_{2.5}$: Exhaust Particulate Matter less than 2.5 microns in diameter ($PM_{2.5}$) emissions were used to evaluate the $PM_{2.5}$ concentration due to ferry operation. $PM_{2.5}$ emissions were conservatively assumed to be equal to total PM emissions.

Modelled emissions are presented in Table 1 as total PM from ferry operations; $PM_{2.5}$ emissions are conservatively assumed to be equivalent to these values. Tier 2 emission factors from the US Environmental Protection Agency (EPA) were used to estimate emissions from both ferry transit and idling.[3,4]

Ferry Health Risk Assessment

Ramboll analyzed Project ferry-related risks by estimating ambient air concentrations of DPM and $PM_{2.5}$. To estimate air concentrations of DPM and $PM_{2.5}$, Ramboll used AERMOD, a steady-state Gaussian plume model developed by USEPA for regulatory applications. AERMOD requires emission source locations and release parameters, receptor locations, and processed meteorological data. Input meteorological data sources include surface data from the Chevron Long Wharf and BAAQMD Mission Bay meteorological observation stations, upper air data from Oakland and San Francisco International Airports, and land cover data from the 1992 National Land Cover Data Set of the United states Geological Survey. For the Richmond area, Ramboll processed the five most recent years (2013, 2014, 2015, 2017, and 2018) of complete meteorological data from nearby stations with the USEPA's meteorological data preprocessor, AERMET. For the San Francisco area, meteorological data from

---

[2] Sensitive receptors identified from the Water Emergency Transportation Authority (WETA) Ferry Terminal Expansion Draft Environmental Impact Report (EIR), Figure 3.6-1: Land Uses and Air Quality Sensitive Receptors. Available at https://weta.sanfranciscobayferry.com/sites/default/files/weta/currentprojects/DFTX/files/DTFXDraftEIREIS/WETA%20DFTX%20Draft%20EIS%20EIR%20June%202013.pdf

[3] Tier 2 emission factors based on California Air Resources Board Non-road Diesel Engine Certification Tier Chart for engines >1207 horsepower. Available at https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

[4] Assumptions of ferry operating conditions are consistent with the 2003 WETA Program EIR (https://weta.sanfranciscobayferry.com/publications) and 2013 WETA Terminal Expansion EIR.

2008 was processed from Mission Bay station, consistent with San Francisco CRRP-HRA Methodology[5]. Wind roses for both meteorological data sets are shown in Figures 1 and 2.

Model Source Parameters

Emissions for ferry idling at both berthing locations were modeled as point sources, while transit emissions were modeled as separated volume sources evenly distributed along the ferry route. Model setup assumes ferry operations occur daily from 6am – 9pm. Source parameters for the ferry model are shown in Table 2, and AERMOD input files are provided electronically as Appendix B. The receptor and source setup are shown in Figure 3.

Exposure Parameters and Cancer Risk Calculation

This analysis followed the recommended methodology from the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Hot Spots Guidance as adopted in the BAAQMD HRA Guidelines[6]. Ramboll conservatively evaluated Project impacts due to ferry emissions using default exposure assumptions for a resident child from OEHHA, with the exception of the high school identified near the San Francisco Ferry Building. The resident child scenario assumes a much higher daily breathing rate and age-sensitivity factor (ASF)[7] than other sensitive receptor populations and therefore is the most conservative scenario to evaluate for this analysis. The exposure parameters used to estimate excess lifetime cancer risks for a resident child and high school student are presented in Table 3.

The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, IF_{inh}, can be calculated as follows:

$$IF_{inh} = \frac{DBR * FAH * EF * ED * CF * ASF}{AT}$$

Where:

IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
DBR	=	Daily Breathing Rate (L/kg-day)
FAH	=	Fraction of Time at Home (unitless)
EF	=	Exposure Frequency (days/year)
ED	=	Exposure Duration (years)
CF	=	Conversion Factor, 0.001 (m^3/L)
ASF	=	Age Sensitivity Factor (unitless)
AT	=	Averaging Time (days)

[5] Bay Area Air Quality Management District, San Francisco Department of Public Health, and San Francisco Planning Department, The San Francisco Community Risk Reduction Plan: Technical Support Documentation, December 2012. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.001272ENV.

[6] BAAQMD. 2016. Proposed Health Risk Assessment Guidelines. Air Toxics NSR program. January. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en

[7] Ibid.

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given in the OEHHA Hot Spots guidance[8].

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. This HRA evaluated theoretical exposures to TACs for two categories of potential adverse health effects, cancer and non-cancer endpoints. Toxicity values used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the toxicity assessment component of a risk assessment.

Excess lifetime cancer risk and chronic hazard quotient (HQs) calculations for Project construction utilized the toxicity values for DPM. Toxicity values for DPM[9]are as presented in Table 4.

Cancer risk and chronic HI were calculated from ambient annual concentrations using intake factors, cancer potency factors, and chronic reference exposure levels calculated consistent with the 2015 OEHHA Hot Spots Guidance[10]. DPM does not have an associated acute HI reference exposure level, so acute HI impacts were not evaluated.

As shown in Table 5, the maximum cancer risk from ferry operations is calculated to be 2.0 in 1 million, compared to a threshold of 10 in 1 million. Ferry operations would also result in a non-cancer hazard index of 0.001 (threshold of 1.0), and maximum $PM_{2.5}$ concentration of 0.003 micrograms per cubic meter ($\mu g/m^3$) (threshold of 0.3 $\mu g/m^3$). The location of the maximally exposed individual resident (MEIR), located on the Richmond side of the transit route, is shown in Figure 4a. While the MEIR on the San Francisco side of the transit route has a lower calculated risk than the on-site receptor, the location of this receptor is shown for reference in Figure 4b. These results are all below the BAAQMD thresholds of significance; thus, health risk impacts associated with the Project's ferry operations are less than significant.

Attachments:

Tables

Figures

Appendix A: Sensitive Receptor Search Results

Appendix B: AERMOD Input Files (provided Electronically)

[8] Cal/EPA. 2015. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[9] Ibid.

[10] Ibid.

TABLES

Table 1
Ferry Particulate Matter Emissions
Point Molate
Richmond, CA

Ferry Engine Parameters:

Engine	Engine Horsepower[1]	Engine Load factor[2] (transit)	Engine Load factor[2] (Idling)	Annual hours in Transit[3]	Annual hours Idling[4]	Brake-specific Fuel Consumption Rate[5] (g/hp-hr)
Ferry total	8000	0.42	0.01	730.0	963.6	184

Ferry PM Emissions assuming Tier 2 Factors:[6]:

Engine	Emission Factor (g/bhp-hr)	Emissions (tons/year)		
		Transit	Idling	Total
Ferry Total	0.15	0.4100	0.013	**0.42**

Notes:

1. Ferries are conservatively assumed to be "large-sized" (350-passenger, 8000 HP) corresponding to classification in the 2003 WETA Program EIR.
2. Engine load factors for ferry transit are from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Table II-3. Engine loads during idling are assumed to be 0.01, consistent with the 2013 SF Ferry Terminal Expansion EIR.
3. Annual Transit hours are based on 4 one-way trips per day, calculated using the transit time of the route from SF Ferry Terminal to Larkspur Terminal (30 minutes). While the proposed distance from SF Ferry Terminal to Point Molate is slightly shorter, 30 minutes is used as a conservative assumption.
4. Annual Idling hours are based on 4 one-way trips per day (see above) using average berth time of 20 mins per visit on both trip ends, as per the 2013 SF Ferry Terminal Expansion EIR.
5. Brake-specific fuel consumption rate is assumed from CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California, Appendix B, Section 2 (SOx Emission Estimation).
6. Tier 2 emission factors are used consistent with the 2013 WETA Program EIR which assumes by 2025 all ferries are expected to be Tier 2 or equivalent. Emission factors are pulled from the California Air Resources Board Non-road Diesel Engine Certification Tier Chart for engines >1207 horsepower.

Abbreviations

bhp - brake horsepower
CARB - California Air Resources Board
g - gram
hp - horsepower
hr - hour
kw - kilowatts
kWh - kilowatt hour
PM - Particulate Matter
tons - short tons
yds - yards
yr - year
MT - metric tons

References

CARB Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Accessible at: https://ww3.arb.ca.gov/regact/2007/chc07/appb.pdf

California Air Resources Board Non-road Diesel Engine Certification Tier Chart. Available online at: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart

California Air Resourcs Board Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets. Available online at: https://ww3.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf

San Francisco Bay Ferry Water Emergency Transportation Authority (WETA) Publications - 2003 Program Environmental Impact Report. Accessible online at: https://weta.sanfranciscobayferry.com/publications

US EPA Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories available at: https://www.epa.gov/sites/production/files/2016-06/documents/2009-port-inventory-guidance.pdf

Table 2
Ferry Model Source Parameters
Point Molate
Richmond, CA

Volume Source Parameters[1,2]

Mode	Release Height (m)	Time of Day	Spacing (m)	Sigma-y (m)	Sigma-z (m)
Transit	10	6am - 9pm	50	23.26	2.33

Point Source Parameters[1,2]

Mode	Release Height (m)	Time of Day	Temp (K)	Release Velocity (m/s)	Diameter (m)
Idling	10	6am - 9pm	550	23	0.07

Notes:

1. Release height, initial vertical dimension, hours of day, temperature, release velocity and diameter are from SF Ferry Terminal Expansion (Footnote 4 on page B-32 of 2014 FEIS/FEIR Appendix B). Initial lateral dimension is consistent with the EPA User's Guide.
2. All source locations are shown in Figure 1

Abbreviations:

K - Kelvin

m - meters

m/s - meters per second

References:

Downtown San Francisco Ferry Terminal Expansion. 2014. Available at https://sanfranciscobayferry.com/sites/default/files/weta/currentprojects/DFTX/files/DFTXFinalEISEIR/Appendix%20B%20Revised%20Air%20Quality.pdf

Table 3
Cancer Risk Exposure Parameters
Point Molate
Richmond, California

Receptor Type	Receptor Age Group	Exposure Parameters									
		Daily Breathing Rate (DBR)[1] (L/kg-day)	Exposure Duration (ED)[2] (years)	Fraction of Time at Home (FAH)[3] (unitless)	Exposure Frequency (EF)[4] (days/year)	Conversion Factor (CF) (m^3/L)	Averaging Time (AT) (days)	Modeling Adjustment Factor (MAF)[5] (unitless)	Intake Factor, Inhalation (IF_{inh}) (m^3/kg-day)	Age Sensitivity Factor (ASF)	Cumulative Intake Factor, Inhalation (IFinh) (m^3/kg-day)
Resident	3rd Trimester	361	0.25	1	350	0.001	25,550	1	0.0012	10	0.68
	Age 0-<2 Years	1,090	2	1	350	0.001	25,550	1	0.030	10	
	Age 2-<16 Years	572	14	1	350	0.001	25,550	1	0.11	3	
	Age 16-30 Years	261	14	0.73	350	0.001	25,550	1	0.037	1	
High School Student	Age 2-<16 Years	520	2	N/A	180	0.001	25,550	1.6	0.01	3	0.04
	Age 16-30 Years	240	2	N/A	180	0.001	25,550	1.6	0.005	1	

Notes:

1. Daily breathing rates reflect breathing rates from Cal/EPA 2015 as follows: For resident: 95th percentile for 3rd trimester and age 0-<2 years; 80th percentile for ages 2-<9 years, 2-<16 years, and 16-30 years. For school, childcare, soccer child, and worker: 95th percentile for all ages.
2. The total exposure duration for operation reflects the default residential exposure duration from Cal/EPA 2015.
3. Fraction of time at home for residential receptors was conservatively assumed to be 1 for age groups younger than 16 years old (100%). The FAH of 0.73 for age group 16 and above is the default value from Cal/EPA 2015.
4. Exposure frequency is the default exposure frequency for residents from Cal/EPA 2015.
5. School child exposure is calculated with an MAF of 24/15 to adjust modeled dispersion factors from 24 hour per day averaging to the 15 hours that emissions occur, assuming the school day completely overlaps.

Calculation:

Resident:

IF_{inh} = DBR * ED * FAH * EF * CF / AT

CF = 0.001 (m^3/L)

Unit Risk Factor = Cumulative Ifinh x Inhalation CPF/1000

Abbreviations:

Cal/EPA - California Environmental Protection Agency

DPM - Diesel Particulate Matter

L - liter

kg - kilogram

m^3 - cubic meter

Reference:

Cal/EPA. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment (OEHHA). February. Available online at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

Table 4
Ferry Toxicity Parameters
Point Molate
Richmond, CA

Chemical	CAS No.	Cancer Potency Factor $[mg/kg\text{-}day]^{-1}$	Chronic REL $[\mu g/m^3]$
DPM	9901	1.1E+00	5.0E+00

Abbreviations:

Cal/EPA = California Environmental Protection Agency

DPM = Diesel Particulate Matter

REL = Reference Exposure Level

Sources:

California Environmental Protection Agency (Cal/EPA), Air Resources Board (ARB). 2011. Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. February 14. Available at http://www.arb.ca.gov/toxics/healthval/contable.pdf. [Accessed February 16, 2012].

Table 5
Ferry HRA Results Summary
Point Molate
Richmond, California

Receptor Type	Max Cancer Risk	Max $PM_{2.5}$ Concentration	Max Chronic HI
	(in a million)	($\mu g/m^3$)	(unitless)
Offsite	0.91	0.0012	2.5E-04
Onsite	2.0	0.0027	5.4E-04
San Francisco[1]	1.5	0.0020	4.0E-04
Ferry Risk at MEISR	**2.0**	**0.0027**	**5.4E-04**
BAAQMD Threshold	10	0.3	1
Exceeds Threshold?	No	No	No

Notes:

1. Sensitive receptors were evaluated near the San Francisco Ferry Building to assess impacts on both ends of the potential ferry route. Residential areas were determined based on San Francisco municipal zoning map.

Abbreviations:

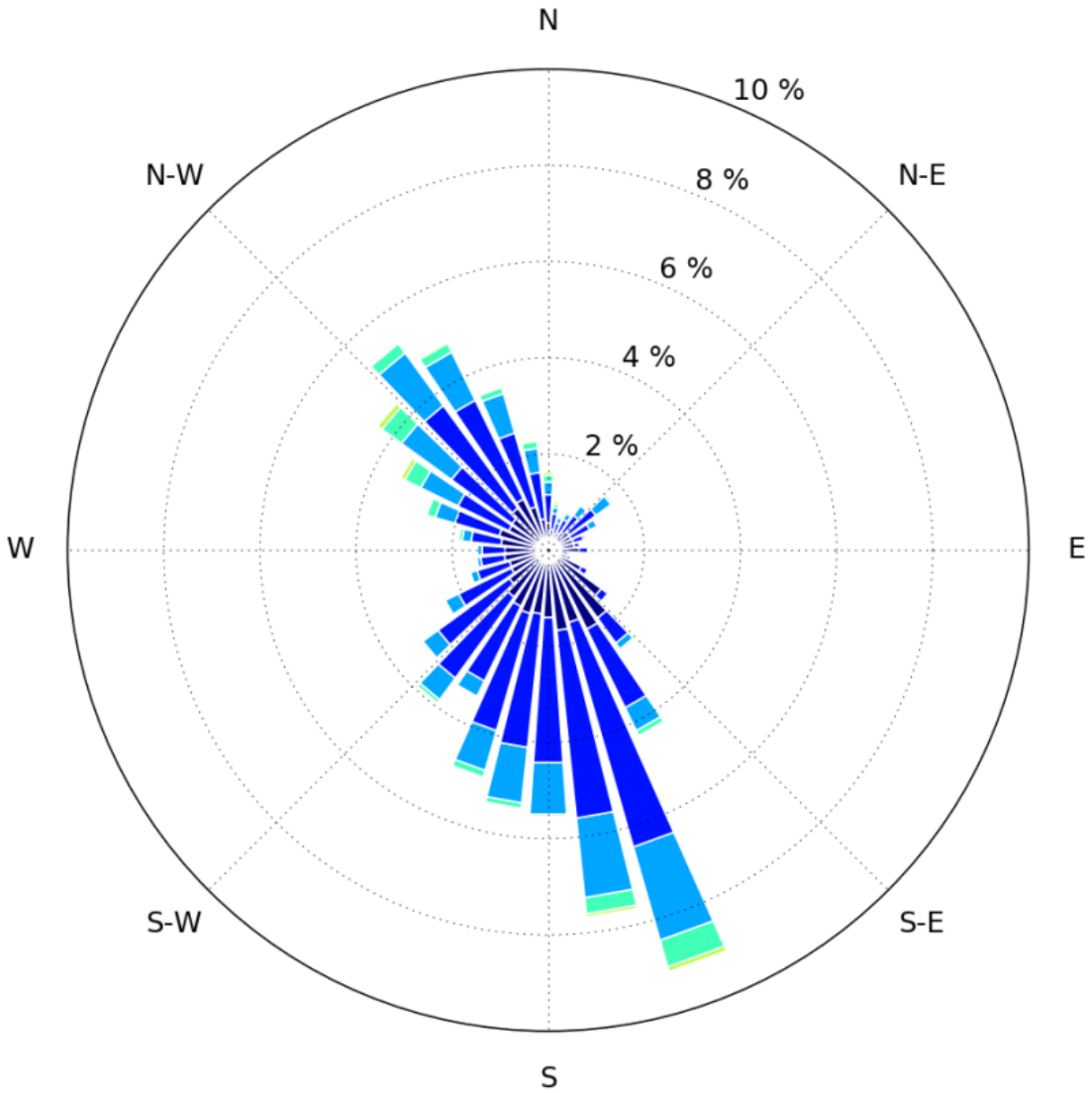
MEISR - Maximally Exposed Individual Sensitive Receptor

$\mu g/m^3$ - Micrograms per cubic meter

References

DataSF. 2019. Zoning Map - Zoning Districts. SFGov. Available at: https://data.sfgov.org/Geographic-Locations-and-Boundaries/Zoning-Map-Zoning-Districts/xvjh-uu28

FIGURES



Wind speed (m/s)

- 0.5 to 2.0 m/s
- 2.0 to 4.0 m/s
- 4.0 to 6.0 m/s
- 6.0 to 8.0 m/s
- 8.0 to 10.0 m/s
- 10.0 to 12.0 m/s
- 12.0 m/s +

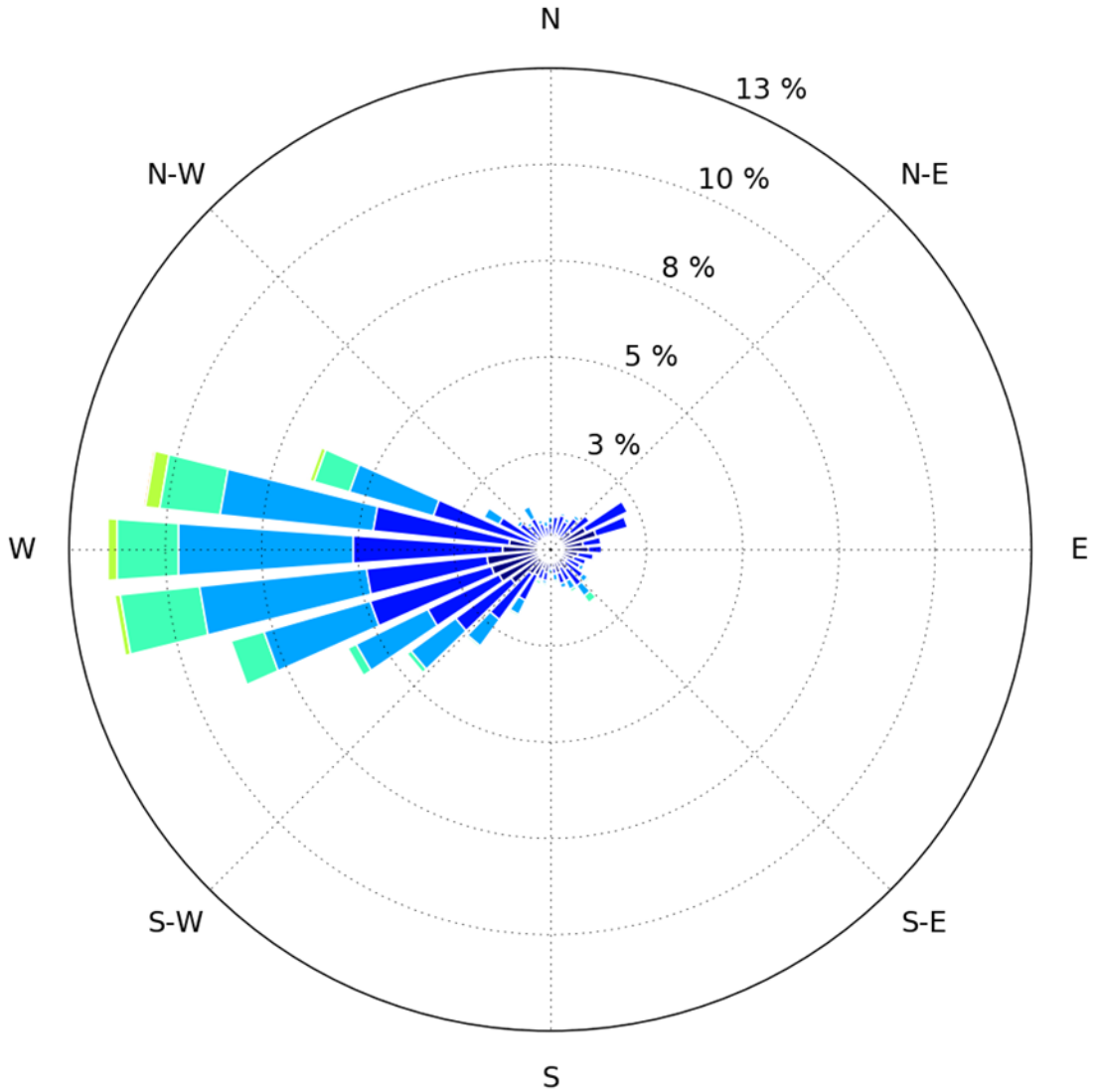
```
Dataset information:
(wind speed in m/s)

 43800 total count
    70 total calm
   0.2 % calm
     0 missing
   0.0 % missing
   2.9 wind speed avg.
   0.5 min. wind speed
  17.6 max. wind speed
```

RAMBOLL

Windrose for Chevron Long Wharf
Point Molate
Richmond, California

FIGURE
1

DRAFTED BY: MJH | DATE: 09/17/19 | PROJECT: 1690014031-003



Wind speed (m/s)

- 0.5 to 2.0 m/s
- 2.0 to 4.0 m/s
- 4.0 to 6.0 m/s
- 6.0 to 8.0 m/s
- 8.0 to 10.0 m/s
- 10.0 to 12.0 m/s
- 12.0 m/s +

```
Dataset information:
(wind speed in m/s)

  8784 total count
     1 total calm
   0.0 % calm
     3 missing
   0.0 % missing
   3.4 wind speed avg.
   0.3 min. wind speed
  14.5 max. wind speed
```

RAMBOLL

Windrose for Mission Bay Station
Point Molate
Richmond, California

FIGURE
2

DRAFTED BY: MJH | DATE: 10/24/19 | PROJECT: 1690014031-003

RAMBOLL

DRAFTED BY: MJH | DATE: 10/23/2019

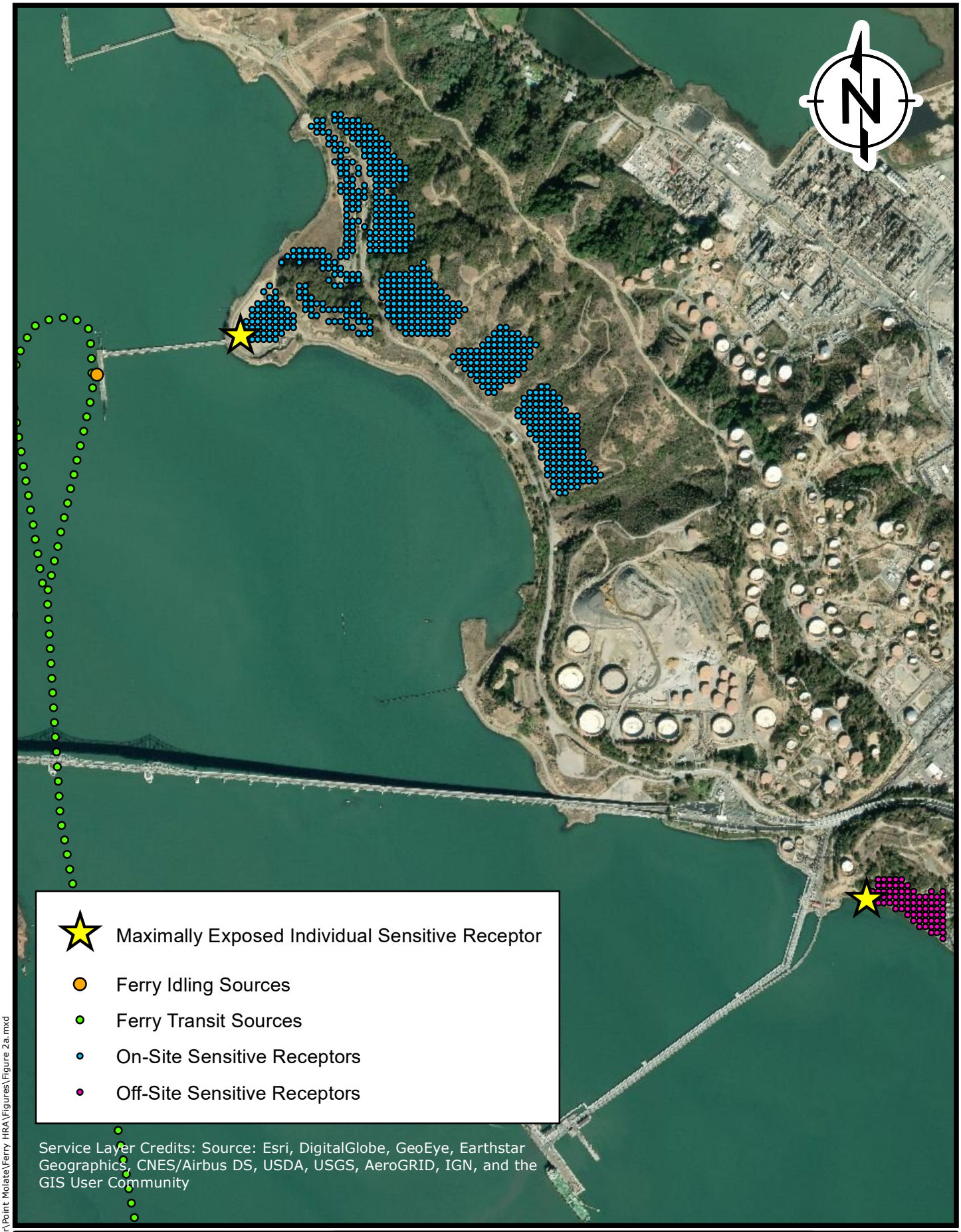
Model Sources and Receptors

Point Molate
Richmond, California

FIGURE
3

PROJECT: 1690014031-

\\ENV-SF-FILE1\public\Air\Point Molate\Ferry HRA\Figures\Figure 1.mxd



RAMBOLL

DRAFTED BY: MJH | DATE: 10/24/2019

Maximally Exposed Individual Sensitive Receptors (Richmond)

Point Molate
Richmond, California

FIGURE
4a

PROJECT: 1690014031-

\\ENV-SF-FILE1\public\Air\Point Molate\Ferry HRA\Figures\Figure 2a.mxd

RAMBOLL

DRAFTED BY: MJH | DATE: 10/24/2019

Maximally Exposed Individual Sensitive Receptors (San Francisco)

Point Molate

Richmond, California

FIGURE

4b

PROJECT: 1690014031-

\\ENV-SF-FILE1\public\Air\Point Molate\Ferry HRA\Figures\Figure 2b.mxd

APPENDIX A

SENSITIVE RECEPTOR SEARCH RESULTS

Point Molate
2100 Stenmark Dr
Richmond, CA 94801

Inquiry Number: 5744904.1s
August 07, 2019

EDR Offsite Receptor Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FRIANT RANCH EVALUATION

Prepared for
Analytical Environmental Services

Prepared by
Ramboll US Corporation

Project Number
1690014031

Date
February 2020
(Modeling Analysis Completed in October, 2019)

POINT MOLATE
ADDITIONAL INFORMATION REGARDING POTENTIAL HEALTH EFFECTS OF AIR QUALITY IMPACTS
RICHMOND, CALIFORNIA

RAMBOLL

CONTENTS

1. INTRODUCTION 2
2. TECHNICAL APPROACH 4
3. RESULTS 6
4. REFERENCES 9

APPENDICES

Appendix A: Emissions Inventory, Spatial Allocation, and SMOKE Setup
Appendix B: PGM Inputs, Outputs, and Assumptions
Appendix C: BenMAP and Health Effects

1. INTRODUCTION

This report presents an estimate of the potential health effects of the emissions of criteria pollutants that may result from the adoption and implementation of the Point Molate Project (the proposed Project). The proposed Project entails mixed-use development on the former Point Molate Navy Fuel Depot and Winehaven Historic District, located on the San Pablo Peninsula in the city of Richmond. This development seeks to provide residential, commercial and recreational services to the public through the rehabilitation of historical buildings and inclusion of retail, restaurant and residential facilities. Additionally, the proposed Project includes conversion of 180 acres of existing land to publicly available trails and open space, and removal of buried storage tanks currently in the Planning Areas. The Point Molate Project may add up to 2,000 residential units to the development or up to 585,000 square feet of commercial space, along with a terminal on an existing pier to be accessible by ferries, shuttles and/or water taxis.

FRIANT RANCH DECISION

As background, Environmental Impact Reports (EIRs) prepared pursuant to the California Environmental Quality Act (CEQA) have long evaluated project-related health effects of toxic air contaminants, such as diesel particulate matter, through quantitative and/or qualitative means relative to air district-issued thresholds of significance. However, EIRs historically have not evaluated the specific health effects of project-related increases in criteria pollutants,[1] other than to note and summarize scientific literature regarding the general effect of those pollutants on health. Instead, in accordance with air district-issued thresholds of significance and industry standard practice at the time, CEQA analysis historically and traditionally focused on estimating project-related mass emissions totals for criteria pollutants and, in certain cases, conducting dispersion modeling to assess impacts on local ambient air quality concentrations.

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (hereinafter referred to as "the Friant Ranch decision"). The Court noted that the EIR at issue in the Friant Ranch decision disclosed the project's significant impacts attributable to the emissions of criteria pollutants, including oxides of nitrogen (NOx), and particulate matter (PM), but did not correlate the project's emissions to health effects. In finding the EIR inadequate in that respect, the Court held that the EIR should have "relate[d] the expected adverse air quality impacts to likely health consequences or explain[ed] in meaningful detail why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of" the project. (Id. at p. 510.)

Ramboll understands the Court's ruling to apply to both attainment and non-attainment areas, as there was no apparent distinction between the two in the Friant Ranch decision. Ramboll also understands the Friant Ranch decision to apply only when there is a significant impact resulting from a project's emission of criteria pollutants, as the decision focused on the informational value of correlating significant impacts to health effects.

[1] Criteria pollutants are those pollutants with an air pollution standard or pollutants which are precursors to those with a standard. Pollutants with an air pollution standard include nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, particulate matter smaller than 2.5 microns in diameter and 10 microns in diameter, and ozone. Precursor pollutants to criteria pollutants include oxides of nitrogen (NOx), oxides of sulfur (SOx), carbon monoxide (CO), and volatile organic compounds (VOCs).

CEQA practitioners and other expert agencies (like air districts) are still developing tools and methodologies to provide the type of CEQA analysis described in the California Supreme Court's decision. In this report, Ramboll presents one method that can be used to correlate project-related mass emissions totals for criteria pollutants to estimated health effects. More specifically, in order to estimate the health effects of the increases of criteria pollutants for the proposed Project, Ramboll applied a photochemical grid model (PGM), Comprehensive Air Quality Model with extensions (CAMx), to estimate the small increases in concentrations of ozone and $PM_{2.5}$ in the region as a result of the emissions of criteria and precursor pollutants from the Project. We then applied a USEPA-authored program, the Benefits Mapping and Analysis Program (BenMAP)[2], to estimate the resulting health effects from the small increases in concentration. Only the health effects of ozone and $PM_{2.5}$ are estimated, as those are the pollutants that USEPA uses in BenMAP to estimate the health effects of emissions of NOx, VOCs, CO, SO_2, and $PM_{2.5}$. Ozone and $PM_{2.5}$ have the most critical health effects and thus are the emissions evaluated to determine the Project's health effects.

ADDITIONAL EVALUATION

In light of a cited decision issued by the California Supreme Court issued in December 2018, this analysis estimates the health effects of criteria pollutants and their precursors, specifically those that are evaluated by the U.S. Environmental Protection Agency (USEPA) in rulemaking setting the national ambient air quality standards: NOx, VOC [also known as reactive organic gases, or ROG, which are virtually the same as VOC with some slight differences] [3], CO, ozone, SO_2, and $PM_{2.5}$. USEPA's default health effect functions in BenMAP for PM use fine particulate ($PM_{2.5}$) as the causal PM agent, so the health effects of PM_{10} are represented using $PM_{2.5}$ as a surrogate. NOx and VOCs are not criteria air pollutants but, in the presence of sunlight, they form ozone and contribute to the formation of secondary $PM_{2.5}$ and thus are analyzed here. As a conservative measure, SO_2 and CO are evaluated due to their small contribution to the formation of secondary $PM_{2.5}$ and ozone. The health effects from ozone and $PM_{2.5}$ are examined for this Project because the USEPA has determined that these criteria pollutants would have the greatest effect on human health. The emissions of other criteria pollutants, including VOC, NOx, CO and SO_2, are analyzed in their contribution in the formation of ozone and secondary $PM_{2.5}$.

The evaluation presented herein serves to describe the potential health effects of the criteria pollutant emissions already disclosed. This evaluation does not make a new significance determination.

[2] https://www.epa.gov/benmap/benmap-ce-manual-and-appendices.

[3] Reactive organic gas (ROG) emissions are quantified and modeled as VOCs in this assessment. ROG means total organic gases minus ARB's "exempt" compounds (e.g., methane, ethane, CFCs, etc.). ROG is similar, but not identical, to USEPA's term "VOC", which is based on USEPA's exempt list, which is slightly different from ARB's list.

2. TECHNICAL APPROACH

The first step in the process is to run the PGM with appropriate information to assess the small increases in ambient air concentrations that the Project emissions may cause. PGMs require a database of information, including the spatial allocation of emissions, in the area to be modeled. This includes both base (background/existing) emissions and Project emissions. The latest publicly available PGM database for Northern California, which contains baseline emissions, was developed by the Bay Area Air Quality Management District (BAAQMD) in support of the 2012 Central California Ozone Study (CCOS)[4] and was adapted for this analysis. This PGM database is tailored for Northern California using California-specific input tools (e.g., the Emission FACtors (EMFAC)[5] mobile source emissions model) and uses a high-resolution 4-km horizontal grid to better simulate meteorology and air quality in the complex terrain and coastal environment of California.

Project emissions included NO_X, SO_2, CO, respirable (PM_{10}) and fine ($PM_{2.5}$) primary particulate matter (PM), and VOCs. As discussed above, NO_X and VOC are precursors to ozone and, along with SO_2, are also precursors to secondarily formed $PM_{2.5}$. CO also plays a smaller role in the formation of ozone and is thus conservatively evaluated here.

The USEPA's air quality modeling guidelines (Appendix W[6]) and ozone and $PM_{2.5}$ modeling guidance[7] recommend using a PGM to estimate ozone and secondary $PM_{2.5}$ concentrations. The USEPA's modeling guidance does not recommend specific PGMs but provides procedures for determining an appropriate PGM on a case-by-case basis. Both the modeling guidelines and guidance note that the CAMx[8] and the Community Multiscale Air Quality (CMAQ[9]) PGMs have been used extensively in the past and would be acceptable PGMs. As such, the USEPA has prepared a memorandum[10] documenting the suitability for using CAMx and CMAQ for ozone and secondary $PM_{2.5}$ modeling of single-sources or group of sources.

To estimate the potential outcome of the proposed Project's emissions on ambient air concentrations, the Project's emissions were added to the CAMx 4-km annual PGM modeling database.[11] Average daily operational and construction emissions from the Project were estimated as described in the Draft Subsequent Environmental Impact Report (SEIR).[12]

For use in PGMs, each Project emissions source must be spatially distributed across the modeling grid cells so that they can be incorporated into the gridded emission inventory. The total unmitigated operational and construction emissions inventory for the Project were used in the analysis. Operational

---

[4] http://www.baaqmd.gov/about-air-quality/research-and-data/research-and-modeling

[5] https://www.arb.ca.gov/emfac/.

[6] https://www3.epa.gov/ttn/scram/appendix_w/2016/AppendixW_2017.pdf.

[7] https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf.

[8] http://www.camx.com/.

[9] https://www.epa.gov/cmaq.

[10] https://www3.epa.gov/ttn/scram/guidance/clarification/20170804-Photochemical_Grid_Model_Clarification_Memo.pdf.

[11] BAAQMD performed WRF meteorological modeling for the CCOS 4-km domain and 2012 calendar year that has been processed by WRFCAMx to generate CAMx 2012 4-km meteorological inputs for the CCOS domain. The CMAQ 2012 emissions have been converted to the format used by CAMx using the CMAQ2CAMx processor.

[12] To the extent that the Draft SEIR used conservative inputs to estimate Project-related criteria pollutants and precursors, the analysis provided herein also is conservatively influenced by those inputs.

emissions include architectural coatings, VOCs in consumer products, natural gas combustion, diesel exhaust from stationary generators, emissions from a potential wastewater treatment plant, emissions associated with motor vehicle use, and emissions associated with ferry operation. Construction emissions include off-road equipment, mobile emissions from worker, vendor, and hauling trips, and architectural coatings. The emissions from architectural coatings, consumer products, natural gas combustion, the stationary generators, the potential wastewater treatment plant, and construction are located onsite, and were therefore allocated to the grid cells representing the Project site. The mobile source category includes both passenger vehicles and trucks; these emissions are spatially distributed in the site's primary grid cell, as well as in surrounding grid cells based on the distribution of project-related traffic from the proposed Project's Transportation Impact Analysis. Emissions from ferry operations were allocated to the grid cells where berthing and transit emissions would occur. Annual emission estimates from the Project were spatially gridded, temporally allocated, and chemically speciated to be used for photochemical grid modelling using the Sparse Matrix Operator Kerner Emissions (SMOKE) emissions modelling system supported by the USEPA. The emissions inventory, spatial allocation, and SMOKE inputs and outputs are shown in Appendix A.

As discussed above, the Northern California 2012 CCOS modeling database was used for this project. The Northern California 4-km PGM modeling databases is based on a 2012 base meteorological year. The 2035 future year projections were used for this analysis, as that is the nearest future year with base emissions available as of the date of this report. The Project's emissions were isolated by the source apportionment tools in CAMx to obtain the incremental ozone and $PM_{2.5}$ concentration impacts due to the Project's emissions. More details and inputs for the PGM modeling are included in Appendix B.

Following completion of the CAMx source apportionment modeling, Ramboll used the USEPA's BenMAP[13, 14] program to estimate the potential health effects of the Project's contribution to ozone and $PM_{2.5}$ concentration. BenMAP uses the concentration estimates produced by CAMx, along with population and health effect concentration-response (C-R) functions, to estimate various health effects of the concentration increases. BenMAP has a wide history of applications by the USEPA and others, including for local-scale analysis[15] as needed for assessing the health effects of a project's emissions. We used the USEPA default BenMAP health effects C-R functions that are typically used in national rulemaking, such as the health effects assessment[16] for the 2012 $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS). The health effects that we used for $PM_{2.5}$ include mortality (all causes), hospital admissions (respiratory, asthma, cardiovascular), emergency room visits (asthma), and acute myocardial infarction (non-fatal). For ozone, the endpoints are mortality, emergency room visits (respiratory) and hospital admissions (respiratory). Details on the BenMAP inputs and outputs and definitions for the health effects are shown in Appendix C.

[13] https://www.epa.gov/benmap/how-benmap-ce-estimates-health-and-economic-effects-air-pollution.

[14] https://www.epa.gov/sites/production/files/2015-04/documents/benmap-ce_user_manual_march_2015.pdf.

[15] https://www.epa.gov/benmap/benmap-ce-applications-articles-and-presentations#local.

[16] https://www3.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf.

3. RESULTS

This section presents the results of the health effects analysis for the incremental increases in $PM_{2.5}$ and ozone resulting from primary and precursor emissions for these constituents. The results presented here describe the potential health effects of the criteria pollutant emissions already disclosed, and the results themselves do not constitute a new significance determination.

It is important to note there are a number of conservative assumptions built into this evaluation, beginning with the quantification of emissions themselves. These conservative assumptions include, but are not limited to, the following:

- The Project is considering two buildout scenarios: one residential heavy and one commercial heavy. Emissions from the higher of the two alternatives (the residential heavy) were conservatively used in this evaluation.
- While full buildout is expected in year 2028, year 2024, the first potential year of residency, was conservatively assumed for operational emissions.
- Use of combined operational emissions at full Project buildout along with average daily construction emissions. In reality, any overlapping years of construction and operation would have lower operational emissions.
- Assumption that health effects occur at any concentration, including small incremental concentrations (discussed further in Appendix C);
- Assumption that all $PM_{2.5}$ is of equal toxicity (discussed further in Appendix C);

As such, results presented below are meant to represent an upper bound of potential health effects, and actual effects may be zero.

POTENTIAL HEALTH EFFECTS

Overall, the estimated health effects from ozone and $PM_{2.5}$ are negligible in light of background incidences. Specifically, for all the health endpoints quantified, the number of estimated incidences is less than or equal to 0.001% of the background health incidence. The “background health incidence” is the actual incidence of health effects as measured in the local population in the absence of additional emissions from the Project. When taken into context, the small increase in incidences and the very small percent of the number of background incidences indicate that these health effects are negligible in a developed, urban environment.

$PM_{2.5}$-related health effects attributed to Project-related increases in ambient air concentrations included asthma-related emergency room visits (0.29 incidences per year), asthma-related hospital admissions (0.02 incidences per year), all cardiovascular-related hospital admissions (not including myocardial infarctions) (0.05 incidences per year), all respiratory-related hospital admissions (0.11 incidences per year), mortality (0.59 incidences per year), and nonfatal acute myocardial infarction (less than 0.03 incidences per year for all age groups).

Ozone-related health effects attributed to Project-related increases in ambient air concentrations included respiratory-related hospital admissions (0.09 incidences per year), mortality 0.05 incidences per year), and asthma-related emergency room visits for any age range (lower than 0.70 incidences per year for all age groups).

Because the health effects from ozone and $PM_{2.5}$ are negligible in light of background incidences, and health effects from other criteria pollutants would be even smaller, the health effects of those other criteria pollutants were not quantified.

UNCERTAINTY

Analyses that evaluate the increases in concentrations resulting from individual sources, and the health effects of increases or decreases in pollutants as a result of regulation on a localized basis are routinely done. This analysis does not tie the increase in concentration to a specific health effect in an individual; however, it does use scientific correlations of certain types of health effects from pollution to estimate increases in effects to the population at large.

There is a degree of uncertainty in these results from a combination of the uncertainty in the emissions themselves, the increase in concentration resulting from the PGM and the uncertainty of the application of the C-R increase. All simulations of physical processes, whether ambient air concentrations, or health effects from air pollution, have a level of uncertainty associated with them, due to simplifying assumptions. The overall uncertainty is a combination of the uncertainty associated with each piece of the modeling study, in this case, the emissions quantification, the emissions model, the PGM, and BenMAP. While these results reflect a level of uncertainty, regulatory agencies, including the USEPA have judged that, even with the uncertainty in the results, the results provide sufficient information to the public to allow them to understand the potential health effects of increases or decreases in air pollution.

The approach and methodology of this analysis ensures that the uncertainty is of a conservative nature. In addition to the conservative assumptions built into the emissions noted above, there are a number of assumptions built into the application of C-R functions in BenMAP that may lead to an overestimation of health effects. For example, for all-cause mortality health effects from $PM_{2.5}$, these estimates are based on a single epidemiological study that found an association between $PM_{2.5}$ concentrations and mortality. While similar studies suggest that such an association exists, there remains uncertainty regarding a clear causal link. This uncertainty stems from the limitations of epidemiological studies, such as inadequate exposure estimates and the inability to control for many factors that could explain the association between $PM_{2.5}$ and mortality such as lifestyle factors like smoking. Several reviews have evaluated the scientific evidence of health effects from specific particulate components (e.g., Rohr and Wyzga 2012; Lippmann and Chen, 2009; Kelly and Fussell, 2007). These reviews indicate that the evidence is strongest for combustion-derived components of PM including elemental carbon (EC), organic carbon (OC) and various metals (e.g., nickel and vanadium); however, there is still no definitive data that points to any particular component of PM as being more toxic than other components. The USEPA has also stated that results from various studies have shown the importance of considering particle size, composition, and particle source in determining the health effects of PM (USEPA, 2009). Further, the USEPA (2009) found that studies have reported that particles from industrial sources and from coal combustion appear to be the most significant contributors to PM-related mortality, consistent with the findings by Rohr and Wyzga (2012) and others. This is particularly important to note here, as a large portion of PM emissions generated from the Project are from entrained roadway dust (see Appendix A), and not from combustion. Therefore, because they do not consider the relative toxicity of PM components, the results presented here are conservative.

For both the $PM_{2.5}$ and ozone health effects calculated, each of the pollutants may be a confounder of the other. Thus, while the C-R functions are from studies that evaluated the effects for each

pollutant individually, both air pollutants could contribute to the health effect outcomes evaluated, and thus the overall impacts may be overstated.

Another uncertainty highlighted by the USEPA (2012) that applies to potential health effects from both $PM_{2.5}$ and ozone, is the assumption of a log-linear response between exposure and health effects, without consideration for a threshold below which effects may not be measurable. The issue of a threshold for $PM_{2.5}$ and ozone is highly debatable and can have significant implications for health effects analyses as it requires consideration of current air pollution levels and calculating effects only for areas that exceed threshold levels. Without consideration of a threshold, any incremental contribution to existing ambient air pollution levels, whether below or above the applicable threshold for a given criteria pollutant, is assumed to adversely affect health. Although the USEPA traditionally does not consider thresholds in its cost-benefit analyses, the NAAQS itself is a health-based threshold level that the USEPA has developed based on evaluating the most current evidence of health effects.

As noted above, the health effects estimation using this method presumes that effects seen at large concentration differences can be linearly scaled down to (i.e., correspond to) small increases in concentration, with no consideration of potential thresholds below which health effects may not occur. This methodology of linearly scaling health effects is broadly accepted for use in regulatory evaluations and is considered as being health protective (USEPA, 2010), but potentially overstates the potential effects. In summary, health effects presented are conservatively estimated, and the actual effects may be zero.

4. REFERENCES

/1/ Kelly, F.J., J.C. Fussell, 2007. Particulate Toxicity Ranking Report. Report Number 2/07. Environmental Research Group, Kings College, London.

/2/ Lippmann, M., L.C. Chen, 2009. Health effects of concentrated ambient air particulate matter (CAPs) and its components. *Crit. Rev. Toxicol.*, 39, 865e913.

/3/ Rohr A.C., R.E. Wyzga, 2012. Attributing Health Effects to Individual Particulate Matter Constituents. *Atmos Environ.*, 62, 130-152. doi:10.1016/j.atmosenv.07.036.

/4/ USEPA, 2009. Integrated Science Assessment (ISA) For Particulate Matter (Final Report, Dec 2009). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=216546

/5/ USEPA, 2010. Quantitative Health Risk Assessment for Particulate Matter. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency. EPA-452/R-10-005. June 2010. Available: https://www3.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf.

/6/ USEPA, 2012. Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter. U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-12-005. https://www3.epa.gov/ttn/ecas/docs/ria/naaqs-pm_ria_final_2012-12.pdf.

APPENDIX A

EMISSIONS INVENTORY, SPATIAL ALLOCATION, AND SMOKE SETUP
POINT MOLATE
RICHMOND, CALIFORNIA

1. INTRODUCTION

As set forth in the Project's Draft Subsequent Environmental Impact Report (SEIR), construction and operational emissions from the Project were estimated using methodologies consistent with the California Emissions Estimator Model (CalEEMod®) and Project-specific data, where available. The model employs widely accepted calculation methodologies for emission estimates combined with appropriate default data if site-specific information is not available.

Annual emission estimates from the Project need to be spatially gridded, temporally allocated, and chemically speciated to be used for photochemical grid modeling. The Sparse Matrix Operator Kerner Emissions (SMOKE) emissions modeling system (Coats, 1996; Coats and Houyoux, 1996)[1] is used for this process.

Development of the gridded Project emissions is described in detail in Section 2 of this Appendix.

2. PROJECT EMISSIONS AND SPATIAL ALLOCATION

Emissions were estimated for the Project to support the photochemical grid model (PGM) and are allocated into 4 kilometer (km) x 4 km grid cells. This section describes those emissions and how they were spatially allocated.

2.1 Project Emissions and Spatial Allocation

For use in PGMs, emissions must be spatially allocated over the area so that they can be incorporated into the gridded emission inventory. The total emission inventory for the Project is below in Table 2-1. Mobile source emissions were split into categories based on the EMFAC2017 emission rates. For particulate matter, less than 2.5 microns in diameter ($PM_{2.5}$) emissions are used in the modelling; less than 10 microns in diameter (PM_{10}) emissions are presented for information below.

Table 2-1. Average Daily Criteria Air Pollutant Emissions Estimates

Emission Category	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
Construction						
Architectural Coating	11	0	0	0	0	0
Off-Road Equipment	0.62	4.6	21	0.036	0.16	0.15
Mobile (total)	3.2	22	24	0.14	11	3.0
Diurnal	0.15	0	0	0	0	0
Hotsoak	0.36	0	0	0	0	0
Idling Exhaust	0.23	2.1	2.5	0.00292	4.1E-05	7.8E-05
Brakewear	0	0	0	0	0.059	0.055
Tirewear	0	0	0	0	0.01501	0.0080
Resting Loss	0.15	0	0	0	0	0
Road Dust	0	0	0	0	11	2.9
Running Exhaust	0.43	17	14	0.14	0.0059	0.011
Running Loss	1.1	0	0	0	0	0

[1] https://www.cmascenter.org/smoke/.

Starting Exhaust	0.79	2.9	6.7	0.00188	2.6E-04	5.3E-04
Operational						
Architectural Coating	8.8	0	0	0	0	0
Consumer Products	37	0	0	0	0	0
Energy (Natural Gas)	1.1	9.7	4.5	0.062	0.78	0.78
Generators	0.18	0.59	3.1	0.0058	0.024	0.024
Ferry (total)	9.2	64	40	0.042	2.3	2.3
Idling	0.3	2.0	1.2	0.0013	0.070	0.070
Transit	8.9	62	39	0.041	2.2	2.2
Wastewater Treatment Plant (total)	3.7	0.33	1.6	0.0031	0.015	0.015
Energy	0.0042	0.038	0.032	2.2E-04	0.00285	0.00285
Process Emissions[1]	3.6	0	0	0	0	0
Generator	0.089	0.30	1.5	0.0029	0.012	0.012
Mobile (total)	16.0	33	165	0.49	29	8.4
Diurnal	0.87	0	0	0	0	0
Hotsoak	2.07	0	0	0	0	0
Idling Exhaust	0.25	0.2	3.2	0.00089	6.2E-05	1.1E-04
Brakewear	0	0	0	0	0.304	0.291
Tirewear	0	0	0	0	0.06654	0.0371
Resting Loss	0.88	0	0	0	0	0
Road Dust	0	0	0	0	28	8.1
Running Exhaust	1.68	21	109	0.48	0.01463	0.029
Running Loss	5.6	0	0	0	0	0
Starting Exhaust	4.63	12.3	53.4	0.01227	1.9E-03	3.8E-03
Project Total	92	135	259	0.78	43	15

Notes:

1. Process VOC emissions from the WWTP are conservatively estimated based on the energy demand of the plant; actual emissions from the WWTP will be lower.

Abbreviations:
CO - Carbon Monoxide
lbs – Pounds
NOx - Nitrogen Oxides
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in diameter
PM_{10} - Particulate Matter less than 10 microns in diameter
ROG - Reactive Organic Gas
SO_2 - Sulfur Dioxide

All emissions listed in Table 2-1 represent the average daily unmitigated construction and operational emissions estimated for the proposed Project's buildout scenario. While full buildout is expected in year 2028, year 2024, the first potential year of residency, was conservatively assumed for operational emissions. The Project is also considering two buildout scenarios: one residential heavy

and one commercial heavy. Emissions from the higher of the two alternatives (the residential heavy) were conservatively used in this evaluation. Further, average daily construction emissions were conservatively added to full buildout operational emissions as there will be some years with overlapping construction and operation. This evaluation will therefore capture the potential worst-case year of impacts.

Figure 2-1 below shows the Project boundary overlay with the 4-km grid. The Project site is outlined in blue. The 4x3 grid is presented on the figure with black grid cells. All non-mobile emissions were allocated to the Project area, and split by grid cell based on relative distribution of parcel area in each cell.

Figure 2-1. Project Boundary and Planning Parcels Over Model Grid Cells

Mobile on-road emissions include light, medium, and heavy-duty vehicles. Table 2-2 below provides a summary of the spatial distribution of off-site mobile emissions broken down by grid cell as shown in Figure 2-2. The grid cells are numbered from left to right and then from top to bottom, as noted in Figure 2-2. Distribution values in this table were calculated based on the breakdown of road segment lengths occurring in each 4km grid cell, weighted by off-site project-related trip distributions given in the Project's Transportation Impact Analysis.

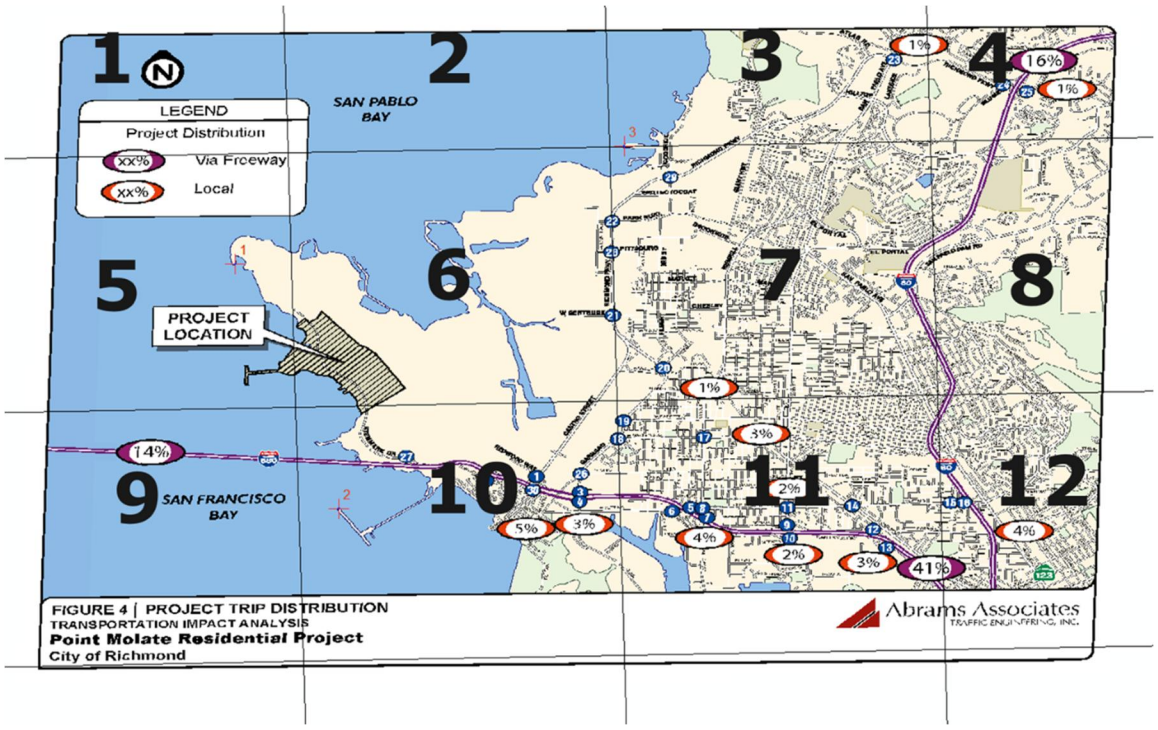
Table 2-2. Off-site Mobile Emission Distribution

Grid Cell	Distribution (%)	Grid Cell	Distribution (%)	Grid Cell	Distribution (%)	Grid Cell	Distribution (%)
1	0.0%	2	0.0%	3	1.0%	4	6.2%

5	0.0%	6	0.0%	7	2.9%	8	3.6%
9	10.2%	10	26.9%	11	40.0%	12	9.2%

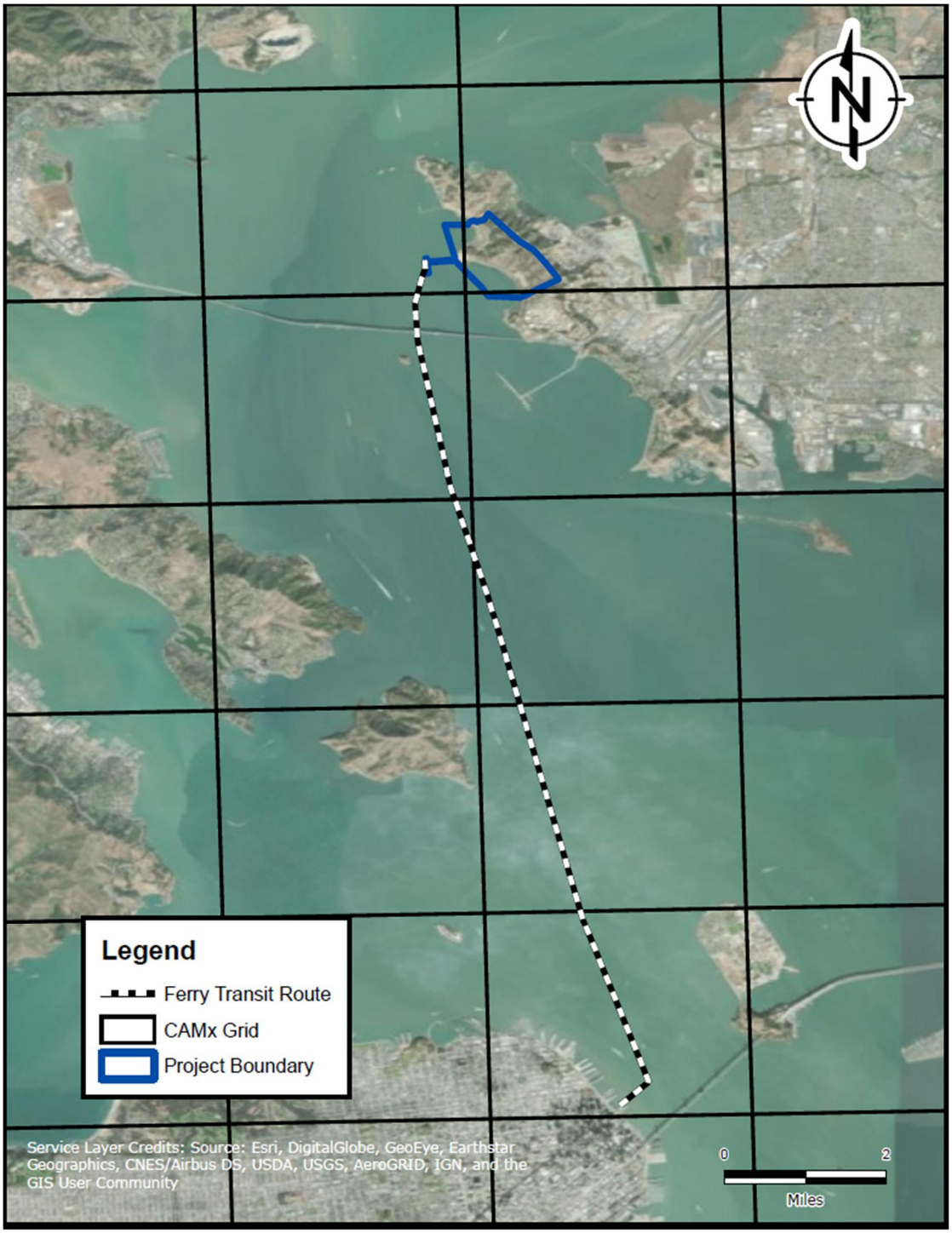
Because the roadway through the project boundary falls entirely into one grid cell (Grid Cell 6), all on-site mobile emissions are allocated to this cell. Figure 2-2 below shows the Project trip distributions over the model grid cells.

Figure 2-2. Project Trip Distribution Over Model Grid Cells



Ferry emissions associated with idling are allocated to the above referenced Grid Cell 5, where the pier is located. Ferry emissions associated with transit are allocated along the anticipated transit route from Point Molate to the SF Ferry Terminal, as shown in Figure 2-3 below. Transit emissions are split by grid cell based on the relative distance within each cell.

Figure 2-3. Proposed Ferry Route Over Model Grid Cells



2.2 Convert Project Inventories to SMOKE Input Format

The first step in the emissions processing was to convert the Project emission inventory into the Flat File 2010 (FF10) format for input to SMOKE. We assigned appropriate Source Classification Codes (SCCs) to the Project emissions sources. Table 2-3 provides the SCC assigned to each Project source.

Table 2-3. Assigned SCC to Project Emission Sources

Emission Source	SCC	SCC Description
Architectural Coatings	2401001000	Solvent Utilization; Surface Coating; Architectural Coatings; Total: All Solvent Types
Construction Off-road Equipment	2270002000	Mobile Sources; Off-highway Vehicle Diesel; Construction and Mining Equipment; Total
Consumer Products	2460000000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Processes; Total: All Solvent Types
Consumer Products	2460100000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Personal Care Products; Total: All Solvent Types
Consumer Products	2460200000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Household Products; Total: All Solvent Types
Consumer Products	2460400000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Automotive Aftermarket Products; Total: All Solvent Types
Consumer Products	2460500000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Coatings and Related Products; Total: All Solvent Types
Consumer Products	2460600000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All Adhesives and Sealants; Total: All Solvent Types
Consumer Products	2460800000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; All FIFRA Related Products; Total: All Solvent Types
Consumer Products	2460900000	Solvent Utilization; Miscellaneous Non-industrial: Consumer and Commercial; Miscellaneous Products (Not Otherwise Covered); Total: All Solvent Types
Energy (Stationary Engines)	20200102	Internal Combustion Engines; Industrial; Distillate Oil (Diesel);Reciprocating
Energy (Natural Gas)	2102006000	Stationary Source Fuel Combustion; Industrial; Natural Gas; Total: Boilers and IC Engines
Marine Vessels (Ferries)	2280002010	Mobile Sources; Marine Vessels, Commercial; Diesel; Ocean-going Vessels
Mobile	220100111B	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV);Rural[2] Interstate: Brake Wear
Mobile	220100111R	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Resting Loss
Mobile	220100111S	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Start

[2] Rural and Urban mobile designations provide equivalent chemical speciation and temporal distributions, as the EMFAC mobile emissions model does not distinguish between the two.

Emission Source	SCC	SCC Description
Mobile	220100111T	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV);Rural Interstate: Tire Wear
Mobile	220100111V	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV);Rural Interstate: Evap (except Refueling)
Mobile	220100111X	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Vehicles (LDGV); Rural Interstate: Exhaust
Mobile	220102011B	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Brake Wear
Mobile	220102011R	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Resting Loss
Mobile	220102011S	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Start
Mobile	220102011T	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Tire Wear
Mobile	220102011V	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Evap (except Refueling)
Mobile	220102011X	Mobile Sources; Highway Vehicles - Gasoline; Light Duty Gasoline Trucks 1 & 2 (M6) = LDGT1 (M5); Rural Interstate: Exhaust
Mobile	2201070110	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV);Rural Interstate: Total
Mobile	220107011B	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Brake Wear
Mobile	220107011I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Idling
Mobile	220107011R	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Resting Loss
Mobile	220107011S	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Start
Mobile	220107011T	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Tire Wear
Mobile	220107011V	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Evap (except Refueling)
Mobile	220107011X	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Interstate: Exhaust
Mobile	2201070130	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Total

Emission Source	SCC	SCC Description
Mobile	220107013B	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Brake Wear
Mobile	220107013I	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Idling
Mobile	220107013R	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Resting Loss
Mobile	220107013S	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Start
Mobile	220107013T	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Tire Wear
Mobile	220107013V	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Evap (except Refueling)
Mobile	220107013X	Mobile Sources; Highway Vehicles - Gasoline; Heavy Duty Gasoline Vehicles 2B thru 8B & Buses (HDGV); Rural Other Principal Arterial: Exhaust
Mobile	220108011B	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Brake Wear
Mobile	220108011R	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Resting Loss
Mobile	220108011S	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Start
Mobile	220108011T	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Tire Wear
Mobile	220108011V	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Evap (except Refueling)
Mobile	220108011X	Mobile Sources; Highway Vehicles - Gasoline; Motorcycles (MC); Rural Interstate: Exhaust
Mobile	223000111B	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Brake Wear
Mobile	223000111T	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Tire Wear
Mobile	223000111X	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Vehicles (LDDV); Rural Interstate: Exhaust
Mobile	223006011B	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Brake Wear
Mobile	223006011T	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Tire Wear
Mobile	223006011X	Mobile Sources; Highway Vehicles - Diesel; Light Duty Diesel Trucks 1 thru 4 (M6) (LDDT); Rural Interstate: Exhaust

Emission Source	SCC	SCC Description
Mobile	223007111B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Brake Wear
Mobile	223007111I	Mobile Sources; Highway Vehicles – Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Idling
Mobile	223007111T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Tire Wear
Mobile	223007111X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 2B; Rural Interstate: Exhaust
Mobile	2230072110	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Total
Mobile	223007211B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Brake Wear
Mobile	223007211I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Idling
Mobile	223007211T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Tire Wear
Mobile	223007211X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 3, 4, & 5; Rural Interstate: Exhaust
Mobile	223007311B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Brake Wear
Mobile	223007311I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Idling
Mobile	223007311S	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Start
Mobile	223007311T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Tire Wear
Mobile	223007311X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Vehicles (HDDV) Class 6 & 7; Rural Interstate: Exhaust
Mobile	223007513B	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Brake Wear
Mobile	223007513I	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Idling
Mobile	223007513S	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Start
Mobile	223007513T	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Tire Wear

Emission Source	SCC	SCC Description
Mobile	223007513X	Mobile Sources; Highway Vehicles - Diesel; Heavy Duty Diesel Buses (School & Transit); Rural Other Principal Arterial: Exhaust
Mobile	2294000000	Mobile Sources; Paved Roads; All Paved Roads; Total: Fugitives
Waste Water Treatment Plant	2630010000	Waste Disposal, Treatment, and Recovery; Wastewater Treatment; Industrial ; Total Processed

2.2.1 Generate Spatial Surrogates for 4-km Domains

As part of the analysis, the Project source emissions need to be spatially allocated to appropriate geographic locations. The emissions can be allocated to modeling grid cells using gridding surrogates. To process the Project emissions, a Project area-based spatial surrogate was developed. The surrogate was developed using the US Environmental Protection Agency (USEPA's) Spatial Allocation Tool,[3] which combines geographical information system (GIS)-based data (shapefiles) and modeling domain definitions to generate the appropriate gridded surrogate data set. The Project sources were then assigned specific surrogates for gridding by cross-referencing the SCCs. As mentioned above, all onsite Project emissions were distributed in the modeling grid cells where the Project is located as shown in Figure 2-1. The on-road mobile sources are spatially distributed in the site's grid cells and surrounding grid cells, as outlined in Table 2-2 and Figure 2-2. Ferry emissions are spatially distributed where the pier is located (for idling emissions) and along the anticipated transit route, as shown in Figure 2-3.

2.2.2 SMOKE 4 km Processing of Project Emissions

SMOKE system was used to process emissions for the Northern California 4-km modeling grid shown in Figure 2-1. A representative week from each month (seven days a month) was used to represent the entire month's emissions. Holidays were modeled separately as if they were a Sunday. SMOKE was applied to perform following tasks:

1. Chemical Speciation: Emission estimates of criteria air pollutants were speciated for the SAPRC07 AERO6 chemical mechanism employed in CMAQ in SMOKE processing. We used speciation profiles compatible with the SAPRC07 AERO6 mechanism for $PM_{2.5}$ from the BAAQMD's modeling system to be consistent with the regional modeling emissions. We then converted those emissions into CAMx-ready formats using CMAQ2CAMx conversion program and species mapping.
2. Temporal Allocation: Annual emission estimates were resolved on an hourly timescale for CAMx modeling. These allocations were determined from the particular source category, specified by the SCC. Monthly, weekly, and diurnal profiles were cross-referenced to SCC to provide the appropriate temporal resolution. The temporal profiles were also obtained from the BAAQMD's emissions modeling system.
3. Spatial Allocation: The Project emission estimates were spatially resolved to the grid cells for modeling using spatial surrogates as described above.

2.2.3 QA/QC of Emissions Modeling

Standard quality assurance/quality control (QA/QC) was conducted during all aspects of the SMOKE emissions processing. These steps followed the approach recommended in the USEPA modeling guidance (USEPA, 2007). SMOKE includes quality assurance (QA) and reporting features to keep track of the adjustments at each processing stage and ensure that data integrity is not compromised. We

[3] https://www.cmascenter.org/sa-tools/documentation/4.2/html/srgtool/SurrogateToolUserGuide_4_2.pdf

carefully reviewed the SMOKE log files for error messages and ensured that appropriate source profiles were used. All error records reported during processing were reviewed and resolved. This is important to ensure that source categories are correctly characterized. We also compared SMOKE input and output emissions: Summary tables were generated to compare input inventory totals against model-ready output totals to confirm consistency. Spatial plots were generated to visually verify correct spatial allocation of the emissions.

2.2.4 Merge SMOKE Pre-merged Emissions to Generate CAMx-ready Emission Inputs

The final step in the emissions processing is to merge the Project gridded emissions with other regional components through the gridded merge program (MRGUAM) for CAMx. We merged the daily emissions in the time format required by CAMx.

2.2.5 Emissions Summary

Summaries of the Project gridded CAMx model-ready emissions data are provided in this section. Table 2-4 summarizes the Project emission inventory data input to SMOKE from the FF10 data files in pounds per day by source type. Table 2-5 presents the emissions data after SMOKE processing. The consistency in data in Tables 2-4 and Table 2-5 offer confidence in the correct operation of the SMOKE emissions processing for CAMx.

Table 2-4. Project Emission Inventory Data Input to SMOKE by Source Type (lbs/day)

Type	CO	NO_X	VOC	SO_2	PM_{10}	$PM_{2.5}$
Mobile	189.1	55.3	19.2	0.63	39.6	11.4
Off-Road Equipment	20.6	4.6	0.6	0.04	0.2	0.2
Energy	4.6	0.9	0.3	0.01	0.04	0.04
Operational Architectural Coatings	-	-	20.1	-	-	-
Consumer Products	-	-	37.4	-	-	-
Ferry	39.7	64.2	9.2	0.04	2.3	2.3
Wastewater Treatment Process[1]	-	-	3.6	-	-	-
Generators	4.6	9.8	1.1	0.06	0.8	0.8
Total	258.5	134.7	91.5	0.8	42.9	14.7

Notes:
1. The generator and energy emissions associated with the Wastewater Treatment Plant are included in the Energy and Generator totals in this table.

Abbreviations:
CO - Carbon Monoxide
NOx - Nitrogen Oxides
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in diameter
PM_{10} - Particulate Matter less than 10 microns in diameter
SO_2 - Sulfur Dioxide
VOC - Volatile Organic Compounds

Table 2-5. Project Emission Inventory Data Output from SMOKE by Project Region (lbs/day)

Type	CO	NO_X	VOC	SO_2	PM_{10}	PM_{2_5}
Onsite	118.8	93.2	81.2	0.2	8.6	4.8
Offsite	139.7	41.6	10.4	0.5	34.3	9.9
Total	258.5	134.7	91.5	0.8	42.9	14.7

Abbreviations:
CO - Carbon Monoxide
NOx - Nitrogen Oxides
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in diameter
PM_{10} - Particulate Matter less than 10 microns in diameter
SO_2 - Sulfur Dioxide
VOC - Volatile Organic Compounds

Spatial displays of the gridded emissions data are presented below. We examined the gridded emissions in 4-km grid to verify accurate spatial allocation by SMOKE. Figures 2-4 through 2-9 displays gridded emissions for the Project inventory in the 4-km modeling grid.

Figure 2-4. Spatial Distribution of CO Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

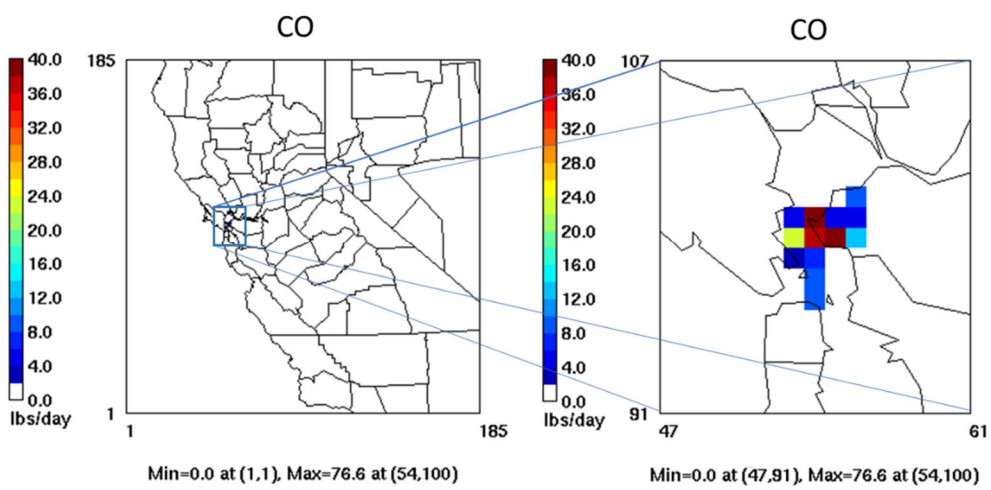


Figure 2-5. Spatial Distribution of NO_x Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

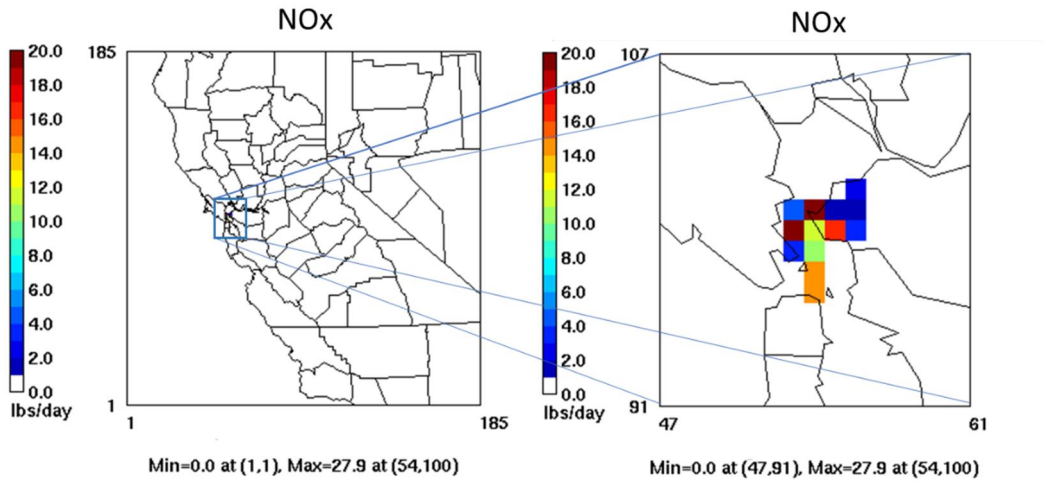


Figure 2-6. Spatial Distribution of VOC Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

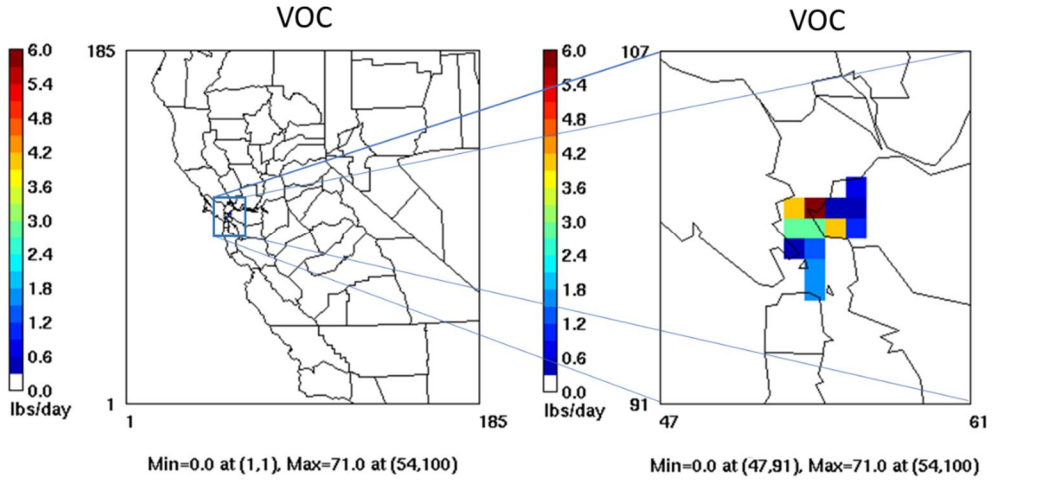


Figure 2-7. Spatial Distribution of SO_2 Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

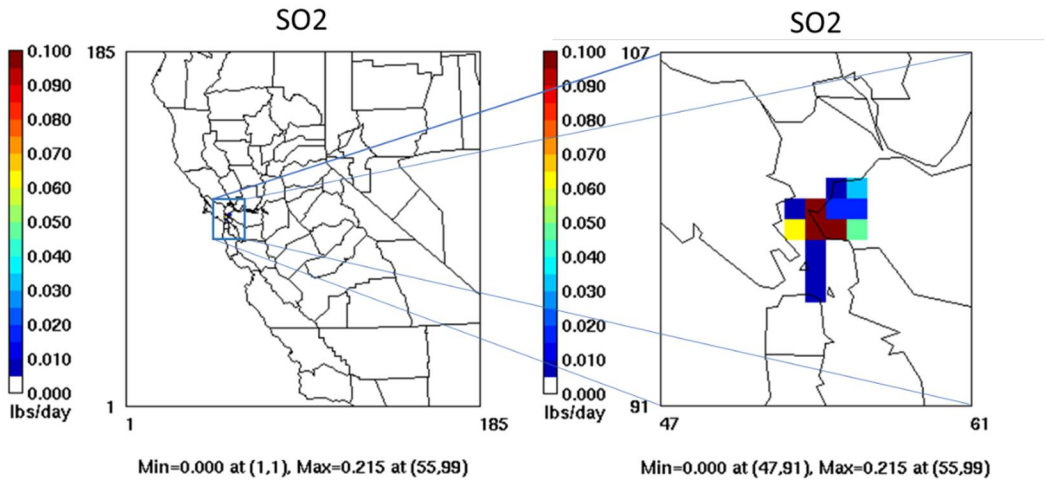


Figure 2-8. Spatial Distribution of PM_{10} Emissions (in lbs/day) for the Project in the Northern California 4-km Domain

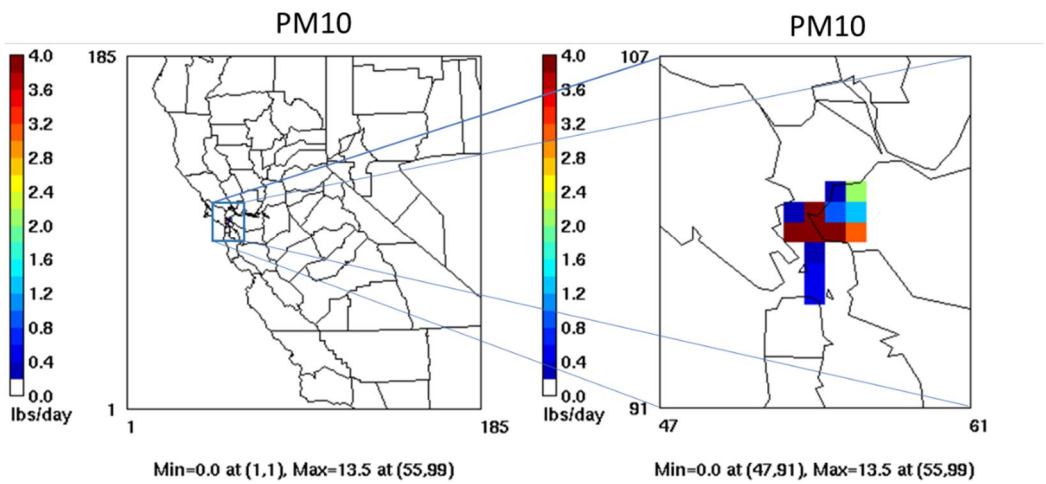
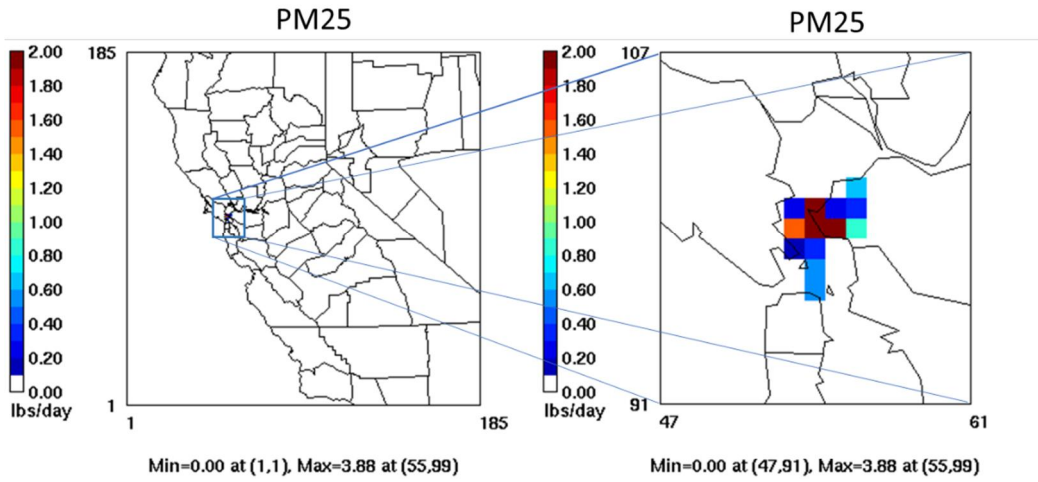


Figure 2-9. Spatial Distribution of $PM_{2.5}$ Emissions (in lbs/day) for the Project in the Northern California 4-km Domain



3. REFERENCES

/1/ Coats Jr., C.J., 1996. High-performance algorithms in the Sparse Matrix Operator Kernel Emissions (SMOKE) modeling system. Proc. Ninth AMS Joint Conference on Applications of Air Pollution Meteorology with AWMA. Amer. Meteor. Soc., Atlanta, GA, 584-588.

/2/ Coats Jr., C.J., Houyoux, M.R., 1996. Fast Emissions Modeling with the Sparse Matrix Operator Kernel Emissions (SMOKE) Modeling System. The Emission Inventory: Key to Planning, Permits, Compliance, and Reporting, Air & Waste Management Association. New Orleans, Louisiana.

/3/ USEPA, 2007. Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5 and Regional Haze. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC. EPA-454/B-07-002.

APPENDIX B

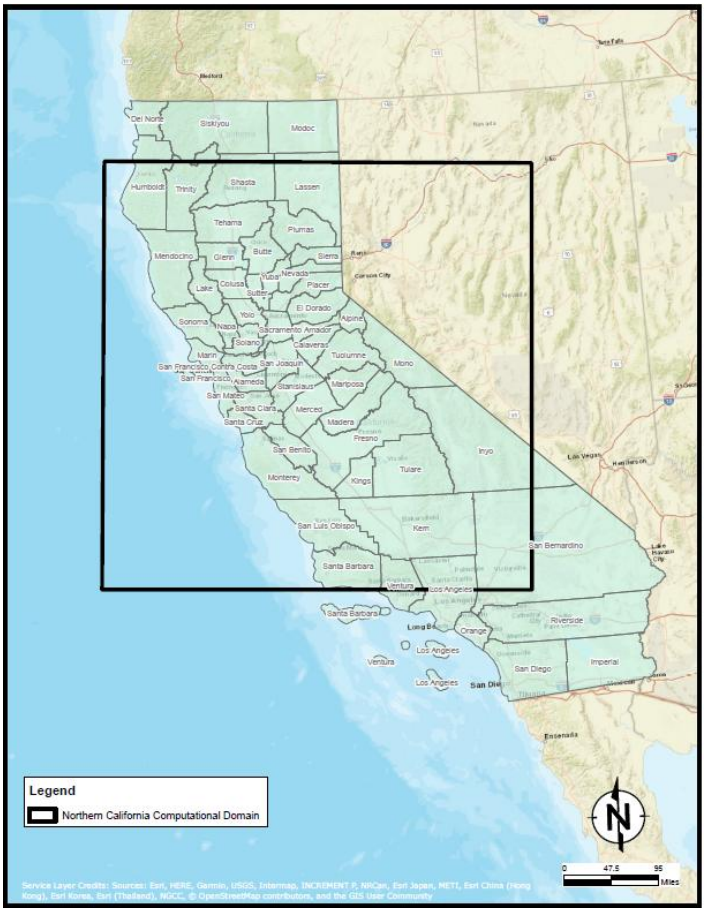
PGM INPUTS, OUTPUTS, AND ASSUMPTIONS
POINT MOLATE
RICHMOND, CALIFORNIA

1. REGIONAL AIR QUALITY MODELING PLATFORM

The Northern California 2012 4-km CAMx modeling database and a projected 2035 emissions database was used in this assessment. The 2012 base case is based on a Photochemical Grid Model (PGM) modeling databases developed by the BAAQMD. This PGM database is tailored for California using California-specific input tools (e.g., the EMFAC[1] mobile source emissions model) and use a high-resolution 4-km horizontal grid to better simulate meteorology and air quality in the complex terrain and coastal environment of California. This contrasts with EPA's national modeling platforms[2] used for national rulemakings (e.g., transport rules such as CSAPR[3] or defining new NAAQS) that use a coarser 12-km horizontal grid resolution.

Details of the model inputs, configuration, and results are presented in Section 2 of this Appendix.

Figure 1-1. Air quality modeling domain for Northern California



[1] https://www.arb.ca.gov/emfac/

[2] https://www.epa.gov/air-emissions-modeling/2014-2016-version-7-air-emissions-modeling-platforms

[3] https://www.epa.gov/csapr

2. REGIONAL GRID MODELING

In this section, we describe the regional PGM modeling setup to assess the impact of the Project emissions on the ambient Particulate Matter less than 2.5 microns in diameter ($PM_{2.5}$) levels in the region. The 2012 base case modeling databases were developed by the BAAQMD for the Community Multiscale Air Quality (CMAQ) PGM. The CMAQ annual 2012 4-km modeling database and annual 2012 4-km Weather Research and Forecasting (WRF) meteorological model output files were obtained from the BAAQMD. The BAAQMD CMAQ and WRF 2012 4-km data were then processed to obtain a 2012 4-km annual PGM modeling database for the Comprehensive Air Quality Model with extensions (CAMx)[4]. The following paragraphs described how Ramboll developed the CAMx 2012 4-km annual database used in this study, starting with the BAAQMD CMAQ and WRF 2012 4-km data. Preparation of the Project emissions inputs for CAMx is discussed in Appendix A.

2.1 Model Inputs and Configuration

Ramboll converted the 2012 CMAQ 2-D and in-line point emissions files from BAAQMD to CAMx area-/point-source emissions files using the CMAQ2CAMx interface program[5]. Seasalt emissions were developed using an emissions processor that integrates published sea spray flux algorithms to estimate sea salt PM emissions for input to CAMx. The CAMx sea salt emissions were then merged with area emissions files. We projected CAMx emissions data to 2035 using county, pollutant and source category-specific growth factors derived from ARB's California Emissions Projection Analysis Model (CEPAM) 2016 SIP inventory. CEPAM estimates emissions for a specific year based on growth and control factors. The growth factors account for county-specific economic activity profiles, population forecasts, and other socio/demographic activity. The control factors reflect the effects of adopted emission control rules.

The most commonly used prognostic meteorological models to provide meteorological fields for air quality modeling are the Weather Research and Forecasting (WRF) model (Skamarock et al., 2005) and the Fifth-Generation Mesoscale Model (MM5; Grell et al, 1994). MM5 is a nonhydrostatic, prognostic meteorological model developed in the 1970s by Pennsylvania State University and the National Center for Atmospheric Research (NCAR) and has been widely used for urban- and regional-scale photochemical, fine particulate, and regional haze regulatory modeling studies. However, development of MM5 ceased in 2006, and WRF has become the new standard model used in place of the older MM5 for regulatory air quality applications in the US. Developed jointly by NCAR and the National Center for Environmental Prediction in late 1990s, WRF has been under continuous development, improvement, testing and open peer-review for more than 10 years and used world-wide by hundreds of researchers and practitioners around the globe for a variety of mesoscale studies. BAAQMD adopted WRF version 3.8 for the 2012 simulations. For the current application, the meteorology remains unchanged for the future year simulation and BAAQMD WRF 2012 4-km model outputs were processed using the WRFCAMx[6] processor to generate the meteorological fields ready for CAMx. The WRF model employs a terrain-following coordinate system defined by pressure, using multiple layers that extend from the surface to 50 millibars (approximately 19 kilometers above ground level [AGL]). A layer averaging scheme is adopted for CAMx simulations to reduce the computational burden. Table 2-1 presents the mapping from the WRF vertical layer structure to the CAMx vertical layers.

---

[4] http://www.camx.com
[5] http://www.camx.com/download/support-software.aspx.
[6] WRFCAMx is available on the CAMx website (http://www.camx.com/download/support-software.aspx)

Table 2-1. Vertical layer structure for WRF and CAMx modeling.

WRF		CAMx			
Layer	Height (m)	Layer	Height (m)	Thickness (m)	Sigma
50	19260	28	19260	2625	0.0000
49	16635				
48	14423				
47	12436	27	12436	1849	0.1339
46	10587				
45	9234				
44	8100	26	8100	960	0.3119
43	7140				
42	6324				
41	5629	25	5629	594	0.4630
40	5034				
39	4524				
38	4086	24	4086	376	0.5806
37	3710				
36	3387				
35	3097	23	3097	261	0.6668
34	2835				
33	2600				
32	2389	22	2389	191	0.7341
31	2198				
30	2028				
29	1873	21	1873	139	0.7863
28	1735				
27	1609				
26	1497	20	1497	102	0.8261
25	1396				
24	1304	19	1304	87	0.8471
23	1217				
22	1133	18	1133	81	0.8661
21	1052				
20	974	17	974	75	0.8840
19	899				
18	827				
17	758	16	758	66	0.9088
16	692	15	692	64	0.9165
15	628				
14	566	14	566	59	0.9312
13	507	13	507	57	0.9382
12	450	12	450	53	0.9450
11	398	11	398	50	0.9513
10	348	10	348	46	0.9573
9	302	9	302	44	0.9629
8	258	8	258	40	0.9682
7	218	7	218	38	0.9731
6	180	6	180	36	0.9777
5	144	5	144	32	0.9821
4	112	4	112	31	0.9861
3	81	3	81	29	0.9899
2	52	2	52	27	0.9935
1	25	1	25	25	0.9969
0	0	0	0	0	1.0000

The lateral boundary conditions (BCs) for the 4-km state-wide modeling grid were extracted from a global model simulation for the year 2012. The Model for Ozone and Related Chemical Tracers Version 4 (MOZART-4; Emmons et al., 2010) is a global chemical transport model developed jointly by NCAR, the Geophysical Fluid Dynamics Laboratory, and the Max Planck Institute for Meteorology, and simulates chemistry and transport of tropospheric gases and bulk aerosols. The MOZART-4 simulation with updated meteorological fields derived from the National Aeronautics and Space Administration's Goddard Earth Observing System Model Version 5 (GEOS-5)[7] were downloaded from the UCAR website[8] and the MOZART2CAMx processor was used to derive both the boundary and the initial conditions for the modeling. Five days of spin-up periods were used for the 4-km grids to minimize the influence of the initial conditions.

Additional data used in the air quality modeling include ozone column data from the Ozone Monitoring Instrument (OMI) which continues the Total Ozone Mapping Spectrometer (TOMS) record for total ozone and other atmospheric parameters related to ozone chemistry (OMI officially replaced the TOMS ozone column satellite data on January 1, 2006). OMI data are available every 24-hours and are obtained from the TOMS ftp site[9]. The CAMx O3MAP program reads the OMI ozone column txt file data and interpolates to fill gaps and generated gridded daily ozone column input data. The OMI data is used in the CAMx (TUV) radiation models which is a radiative transfer model that develops clear-sky photolysis rate inputs for CAMx. The landuse file was generated with the WRFCAMx processor and modified to remove lakes and set coastal waters with a surf zone width of 50 m, this file was used to update the emissions database and provide more realistic representation of sea salt emissions.

Table 2-2 presents the CAMx configuration used for the modeling in this Project analysis. In the past, the Carbon-Bond IV (CB4) chemical mechanism (Gery et al., 1989) has been predominantly used for the California State Implementation Plan (SIP) SIP modeling. In 1999, however, California Air Resources Board's (CARB's) Reactivity Scientific Advisory Committee recommended switching to the 1999 State-wide Air Pollution Research Center (SAPRC99) chemical mechanism (Carter, 2000) based on a comprehensive review by Stockwell (1999), and SAPRC99 has since been the mechanism of choice for the California SIPs. The 2007 update to the SAPRC chemistry mechanism, called SAPRC07 (Carter, 2010), replaced the dated SAPRC99 mechanism. The version implemented in CAMx is SAPRC07TC, which includes additional model species to explicitly represent selected toxics and reactive organic compounds and uses numerical expressions of rate constants that are compatible with the current chemistry mechanism solver. The partitioning of inorganic aerosol constituents (sulfate, nitrate ammonium and chloride) between gas and aerosol phases is performed using the ISORROPIA module. The SOAP semi-volatile equilibrium scheme performs the organic aerosol-gas partitioning. These processes are described in more detailed in the CAMx user guide.[10]

---

[7] http://www.acd.ucar.edu/wrf-chem/mozart.shtml

[8] https://www.acom.ucar.edu/wrf-chem/mozart.shtml

[9] ftp://toms.gsfc.nasa.gov/pub/omi/data/

[10] http://www.camx.com/files/camxusersguide_v6-50.pdf

Table 2-2. CAMx modeling configuration.

Science Option	Configuration	Notes
Model Code	CAMx v6.5	Released April 2018
Horizontal Grid	4-km 1-way nesting	
O3 and PM 4-km	185 x 185 grid cells	
Vertical Grid	28 vertical layers extending up to ~19 km AGL	Collapsed from 50 WRF/MM5 layers (see Table 3-1)
Initial Conditions	Extracted from the MOZART global model outputs	5-day spin-up for 4-km domain
Boundary Conditions	Extracted from the MOZART global model outputs	Boundary concentration set for 4-km domain extracted using MOZART2CAMx
Photolysis Rate	Photolysis rates lookup table	Derived from satellite measurements and TUV processor
Gas-phase Chemistry	SAPRC07TC	Solved by the Euler Backward Iterative (EBI) solver
Aerosol-phase Chemistry	ISORROPIA (inorganic aerosol) SOAP v2.1 (organic aerosol)	
Meteorological Input Preprocessor	WRFCAMx v4.7	
Advection	Piecewise Parabolic Method (PPM)	
Diffusion	Eddy diffusion algorithm	

2.2 Model Results

The future modeling scenario was simulated using the CAMx source apportionment technology. Both cumulative concentrations from all the sources and the concentrations from Project-specific emissions are derived from a single simulation following the previous section model configuration. The model results of hourly $PM_{2.5}$ concentrations were processed into aggregated metrics that are relevant to health effects.

The metrics relevant to the $PM_{2.5}$ health effects selected in this study are 24-hour and annual average concentrations (see Appendix C). Figure 2-1 shows spatial plots of annual average and a single day episode maximum 24-hour average $PM_{2.5}$ concentrations from the base case. In the base case, the central portion of California shows annual $PM_{2.5}$ concentrations between 10 and 15 $\mu g/m^3$ with isolated regions in Glenn and Butte county that could reach up to 20 $\mu g/m^3$. Annual Average concentrations in the Bay Area range between 5 and 10 $\mu g/m^3$ with isolated areas that could reach up to 15 $\mu g/m^3$ in Contra Costa, Alameda and Sant Clara counties. Contributions of the Project emissions to annual average $PM_{2.5}$ are 0.026 $\mu g/m^3$ at the most impacted area and represents only a 0.27 percent increase over the base case concentrations at that location. Contributions to the maximum 24-hour average

$PM_{2.5}$ are 0.085 μg/m^3 at the most impacted area and represent only a 0.59 percent increase over the base case concentrations at that location. Figure 2-2 presents increases in quarterly average and maximum 24-hour average $PM_{2.5}$ due to the Project by $PM_{2.5}$ component at the grid cell of maximum impact. It confirms that the $PM_{2.5}$ increases due to the Project are mostly due to primary PM components (referred to in the chart as primary organic aerosol [POA], elemental carbon [EC] and other primary PM). The figure also shows that nitrate is the most important contributor to the secondary $PM_{2.5}$.

Figure 2-1. Results of the 4 km $PM_{2.5}$ Modeling Domain

$PM_{2.5}$ Concentrations from the Base Case Scenario (left panels);
Increases in $PM_{2.5}$ due to the Project (center and right panels);
Annual Averages (top panels);
Maximum 24-hour Averages (bottom panels)

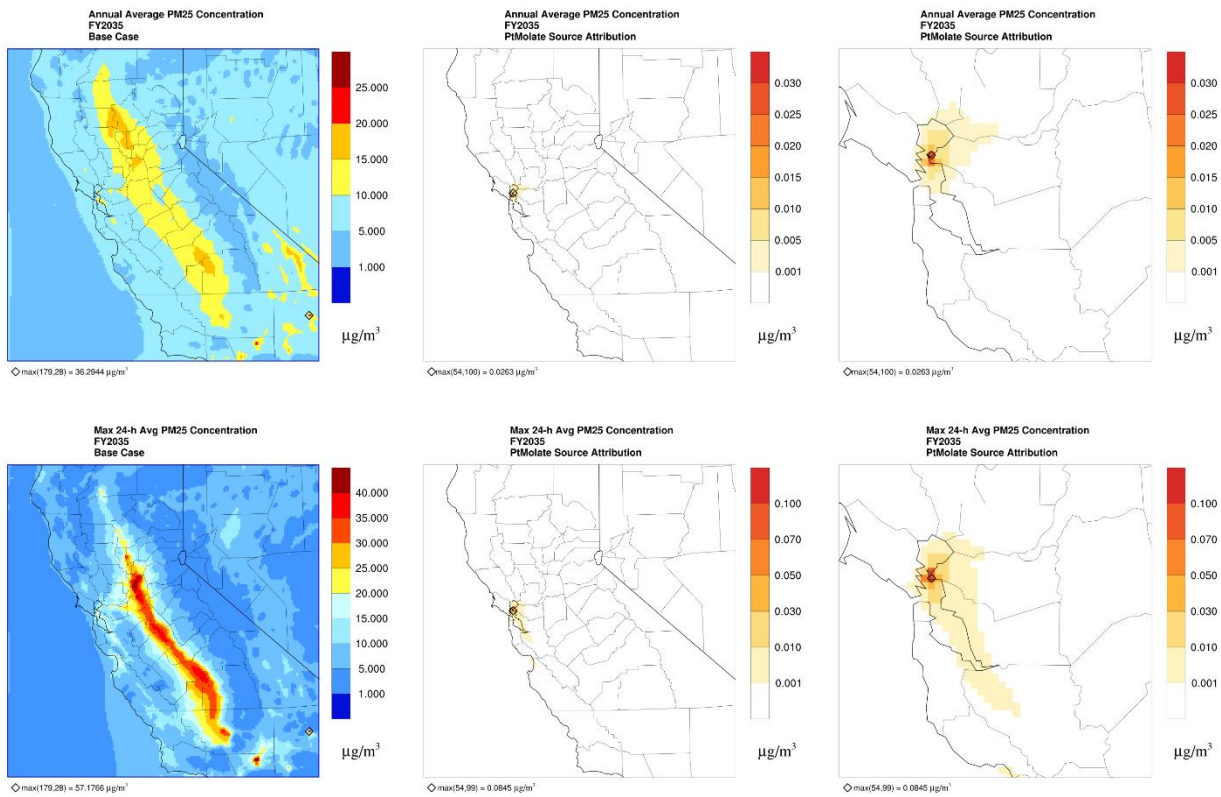
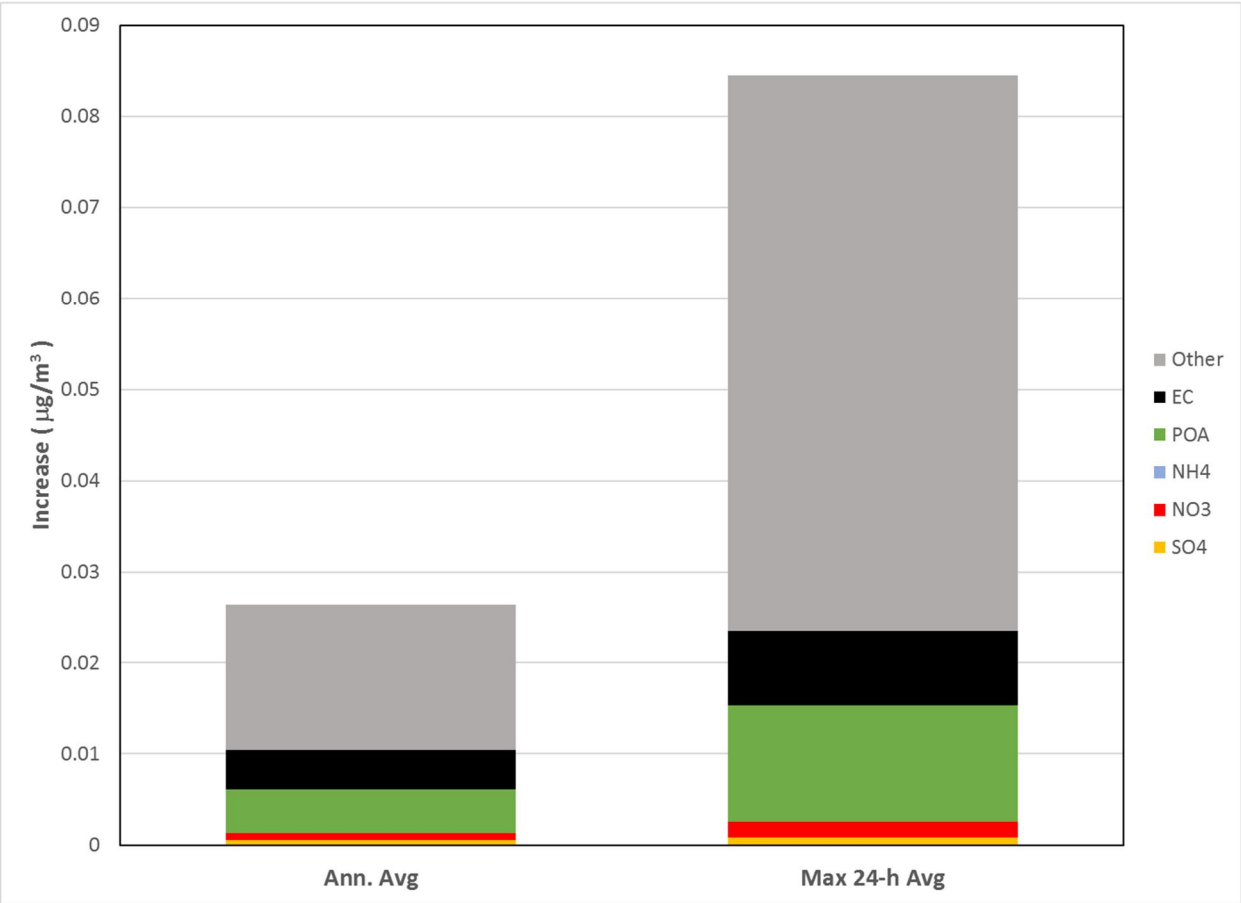


Figure 2-2. Increases in Annual Average and Episode Maximum 24-hour Average $PM_{2.5}$ Concentrations due to the Project by $PM_{2.5}$ Component: fine particulate sulfate (SO4), nitrate (NO3), ammonium (NH4), primary organic aerosol (POA), elemental carbon (EC), and other primary PM (Other); Where the Maximum Impact of the Project's Emissions Occurred



The metrics relevant to the ozone health effects selected in this study are consistent with the ozone NAAQS (see Appendix C). The model provides hourly concentrations that are further post-processed to produce maximum daily average 8-hour (MDA8) ozone concentrations for each day. Figure 2-3 displays spatial plots of the annual average MDA8 ozone for the 2035 emissions scenario and the corresponding annual average MDA8 increases due to the Projects emissions. In the 2035 base case emissions scenario, modeling results show a gradient with lower MDA8 concentrations in the range of 30 to 40 ppb in the western side of the domain and larger concentrations in the range of 45 to 50 ppb in the eastern side of the domain with the largest concentrations of 53 ppb in San Bernardino County. Concentrations in the central valley range between 40 to 45 ppb. MDA8 ozone concentrations in counties around the Bay area are generally low and range between 30 to 37.5 ppb. The maximum impact to the annual average MDA8 ozone concentrations due to the Project is 0.007 ppb and occurs in western Contra Costa County where it represents only a 0.02 percent increase over the base case concentrations.

Figure 2-4 displays MDA8 ozone for the base case and increases in MDA8 ozone due to the project on October 2[d], the day that the Project has the highest ozone contribution for the entire modeling year. The highest MDA8 ozone contribution due to the Project is 0.051 ppb (Figure 2-4, right) and occurs west of Contra Costa County where it represents a 0.08 percent increase over the base case concentrations on that day.

Figure 2-3. Annual Average MDA8 Ozone Concentrations from the Base Case Scenario (left) and Increases in Annual Average MDA8 Ozone Concentrations due to the Project (right) for the Annual Modeling of the 2035 Emissions Scenario

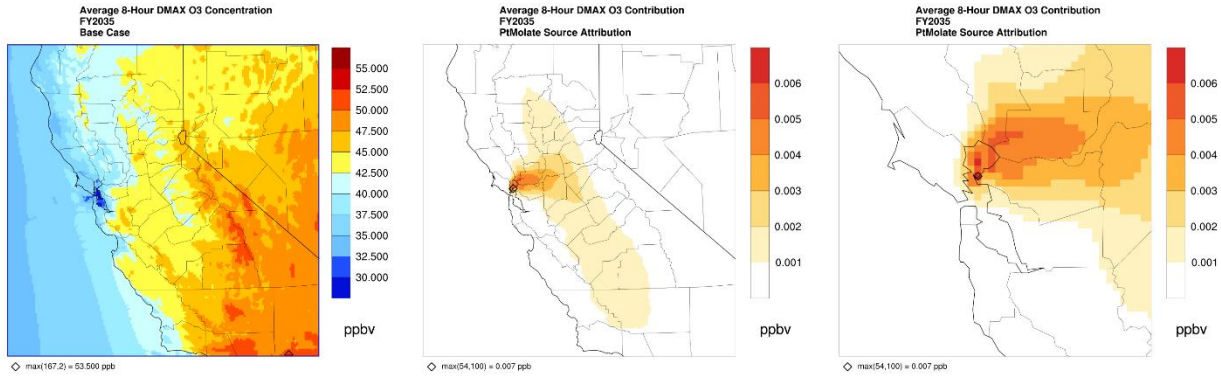
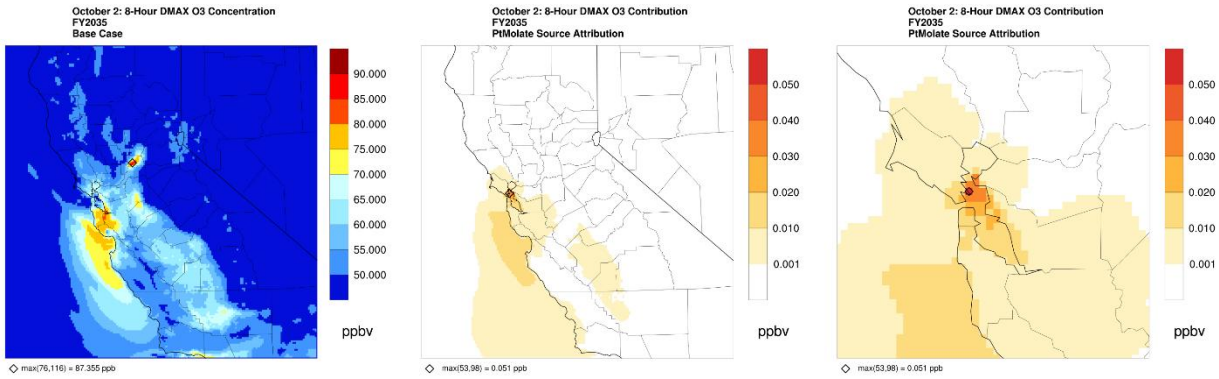


Figure 2-4. MDA8 Ozone Concentrations from the Base Case Scenario (left) and Increases in MDA8 Ozone Concentrations due to the Project (right) on October 2, the Day with the Highest Project Ozone Contributions for the Annual Modeling of the 2035 Emissions Scenario



3. REFERENCES

/1/ Carter, W.P.L., 2000. Documentation of the SAPRC99 Chemical Mechanism for VOC Reactivity Assessment, Final Report to California Air Resources Board, Contract No. 92-329, and (in part) 95-308, May 8, 2000. http://www.engr.ucr.edu/~carter/reactdat.htm

/2/ Emmons, L.K., Walters, S., Hess, P.G., Lamarque, J.F., Pfister, G.G., Fillmore, D., Granier, C., Guenther, A., Kinnison, D., Laepple, T., Orlando, J., Tie, X., Tyndall, G., Wiedinmyer, C., Baughcum, S.L., Kloster, S., 2010. Description and evaluation of the Model for Ozone and Related chemical Tracers, Version 4 (MOZART-4), Geoscientific Model Development, 3, 43-67.

/3/ Gery, M.W., Whitten, G.Z., Killus, J.P., Dodge, M.C., 1989. A Photochemical Kinetics Mechanism for Urban and Regional Scale Computer Modeling. J. Geophys. Res., 94, 925-956.

/4/ Grell, G.A., Dundhia, J., Stauffer, D.R., 1994. A description of the Fifth-Generation Penn State/NCAR Mesoscale Model (MM5), National Center for Atmospheric Research, Boulder, CO, NCAR/TN-398+STR.

/5/ Skamarock, W.C., Klemp, J.B., Dudhia, J., Gill, G.O., Barker, D.M., Wang, W., Powers, J.G., 2005. A description of the Advanced Research WRF Version 2. NCAR Technical Note NCAR/TN-468+STR, June 2005.

/6/ Stockwell, W.R., 1999. Review of the updated maximum incremental reactivity scale of Dr. William Carter. Division of Atmospheric Sciences, Desert Research Institute, November 29, 1999. http://www.cert.ucr.edu/~carter/pubs/stockrev.pdf

APPENDIX C

BENMAP AND HEALTH EFFECTS
POINT MOLATE
RICHMOND, CALIFORNIA

1. HEALTH EFFECTS ANALYSIS

The potential health effects of ozone and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) concentrations due to the Project's emissions were estimated using the Environmental Benefits Mapping and Analysis Program (BenMAP), Community Edition v1.5 (March 2019).[1] BenMAP, originally developed by the United States Environmental Protection Agency (USEPA), is a powerful and flexible tool that helps users estimate human health effects and economic benefits resulted from changes in air quality. BenMAP outputs include PM- and ozone-related health endpoints such as premature mortality, hospital admissions, and emergency room visits. BenMAP uses the following simplified formula to relate changes in ambient air pollution to certain health endpoints (USEPA, 2018)[2]:

Health Effect = Air Quality Change × Health Effect Estimate × Exposed Population × Background Health Incidence

- Air Quality Change - The difference between the starting air pollution level (the base) and the air pollution level after some change, such as a new source.
- Health Effect Estimate - An estimate of the percentage change in an adverse health effect due to a one unit change in ambient air pollution. Effect estimates, also referred to as concentration-response (C-R) functions, are obtained from epidemiological studies.
- Exposed Population - The number of people affected by the air quality change. The government census office is a good source for this information. This analysis uses data from PopGrid, which is an add-on program to BenMAP that allocates the block-level U.S. Census population to a user-defined grid.[3]
- Background Health Incidence - An estimate of the average number of people that die (or suffer from some adverse health effect) in a given population over a given period of time. For example, the health incidence rate might be the probability that a person will die in a given year. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization.

The health endpoints analyzed in this study and the BenMAP results are presented in Section 2 of this appendix.

2. HEALTH EFFECTS ANALYSIS RESULTS

This section presents the health outcome of the Project emissions on the population in the Northern California model domain, estimated by the BenMAP model. The Comprehensive Air Quality Model with extensions (CAMx) modeling results (Appendix B) are processed to generate aggregated daily averages $PM_{2.5}$ and maximum daily 8-hour ozone appropriate for various health endpoints. The CAMx simulation results from the full year (January to December) are used to estimate the health effects of $PM_{2.5}$ and ozone. BenMAP translates increases in the pollutant concentration due to the Project emissions to changes in the incidence rate for each health effect using a C-R function derived from previously published epidemiological studies. BenMAP often provides multiple C-R functions based on

[1] http://www.epa.gov/air/benmap/

[2] The common function used for calculating health effects is the following log-linear function: Health Effect = Background Health Incidence x [1 – exponential (Health Effect Estimate * Air Quality Change)] x Exposed Population

[3] https://www.epa.gov/benmap/benmap-community-edition

different epidemiological studies for a given health endpoint. We used the USEPA default C-R functions when evaluating health effects, except for more refined population data. This analysis uses population data from PopGrid, which allocates the census population to each modeled 4x4 kilometer (km) grid cell.

The population used for both the quantified health effects and the calculation of background health incidence presented here is for the future year 2035[4], for consistency with the CAMx model year. This is conservative compared to the Project build out year of 2028.

2.1 $PM_{2.5}$ Health Effects

Although there are a large number of potential health endpoints that could be included in the analysis as described above, we selected the key health endpoints that have been the focus of recent United States Environmental Protection Agency (USEPA) risk assessments (e.g., USEPA, 2010; USEPA, 2014). For example, the USEPA notes that health endpoints were selected based on consideration of at-risk populations (e.g. asthmatics), endpoints that have public health significance, and endpoints for which information is sufficient to support a quantitative concentration-response relationship (USEPA, 2014).

The health endpoints and associated C-R functions examined in this study are presented in Table 2-1. Each C-R function is based on a certain age range for the given health endpoint depending on the underlying epidemiological study on which it is based. Increases in the BenMAP-estimated health effect incidences and percent of background health incidence due to the Project emissions are presented in Table 2-2. These values reflect the total health effects across the Northern California model domain.

Table 2-1. Summary of $PM_{2.5}$ Health Endpoints Used in this Study

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Emergency Room Visits, Asthma	0-99	24-hr mean			Mar et al., 2010[1]
Mortality, All Cause	30-99	24-hr mean	Quarterly mean	Mean	Krewski et al., 2009[1]
Hospital Admissions, Asthma	0-64	24-hr mean	-	-	Sheppard, 2003[1]
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	24-hr mean	-	-	Bell, 2012[1]
Hospital Admissions, All Respiratory	65-99	24-hr mean	-	-	Zanobetti et al., 2009[1]
Acute Myocardial Infarction, Nonfatal	18-24	24-hr mean	-	-	Zanobetti et al., 2009[1]
Acute Myocardial Infarction, Nonfatal	25-44	24-hr mean	-	-	
Acute Myocardial Infarction, Nonfatal	45-54	24-hr mean	-	-	

[4] For background incidence rates, BenMAP projects likely mortality rates for future years, but for other health effects, incidence rates are based on population changes only and may not reflect rates for future years.

Table 2-1. Summary of $PM_{2.5}$ Health Endpoints Used in this Study

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Acute Myocardial Infarction, Nonfatal	55-64	24-hr mean	-	-	
Acute Myocardial Infarction, Nonfatal	65-99	24-hr mean	-	-	

[1] C-R functions available in BenMAP (USEPA, 2018)

The results show that the highest health effect is for all-cause mortality, with an estimated mean increased incidence of 0.59 deaths per year due to the project emissions. Smaller mean increased incidences were estimated for other relevant $PM_{2.5}$-related health effects: 0.29 increase in incidence of asthma related emergency room visits, 0.11 increase in incidence of respiratory hospital admissions, and 0.05 increase in incidence of cardiovascular hospital admissions.

It should be noted, however, that the estimated increased incidence in those health effects are quite minor compared to the background health incidence values (shown in Table 2-2 as percent of Background Health Incidence). For example, for mortality, the increase of 0.59 deaths per year due to project emissions represents 0.0002% of the total all-cause mortality for people ages 30 to 99.

Table 2-2. BenMAP-Estimated Mean $PM_{2.5}$ Health Effects of the Project Emissions Across the Northern California Model Domain[1]

Health Endpoint[2]	Incidences (Mean)	Percent of Background Health Incidence (%)
Emergency Room Visits, Asthma [0-99]	0.29	0.0003%
Mortality, All Cause [30-99]	0.59	0.0002%
Hospital Admissions, Asthma [0-64]	0.02	0.0001%
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions) [65-99]	0.05	0.00003%
Hospital Admissions, All Respiratory [65-99]	0.11	0.00008%
Acute Myocardial Infarction, Nonfatal [18-24]	0.00002	0.00009%
Acute Myocardial Infarction, Nonfatal [25-44]	0.001	0.00009%
Acute Myocardial Infarction, Nonfatal [45-54]	0.004	0.00009%
Acute Myocardial Infarction, Nonfatal [55-64]	0.006	0.00009%
Acute Myocardial Infarction, Nonfatal [65-99]	0.03	0.00009%

[1] Health effects are shown terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences) values.

[2] Affected age ranges are shown in square brackets.

2.2 Ozone Health Effects

As noted above, although a larger number of health endpoints could be evaluated, we selected the health endpoints based on recent USEPA risk assessments (USEPA, 2010; USEPA, 2014). The health endpoints and associated C-R functions examined in this study are presented in Table 2-3. Each C-R function is associated with a certain age range for the given health endpoint depending on the epidemiological study on which it is based. Increases in the BenMAP-estimated health effect incidences and percent of background health incidence due to the Project emissions are presented in Table 2-4Table 2-4. These values reflect the total health effects across the Northern California model domain.

Table 2-3. Summary of Ozone Health Endpoints Used in this Study.

Health Endpoint	Age Range	Daily Metric	Seasonal Metric	Annual Metric	C-R Function Selected
Hospital Admissions, All Respiratory	65 - 99	MDA8	-	-	Katsouyanni et al., 2009[1]
Mortality, Non-Accidental	0 - 99	MDA8	-	-	Smith et al., 2009[1]
Emergency Room Visits, Asthma	0 - 17	MDA8	-	-	Mar and Koenig, 2009[1]
Emergency Room Visits, Asthma	18 - 99	MDA8	-	-	Mar and Koenig, 2009[1]

[1] C-R function available in BenMAP (USEPA, 2018)

For this project, asthma related emergency room visits are associated with the highest health effects due to the project emissions in the Northern California domain (0.70 increase for adults ages 18 to 99 and 0.47 increase for children ages 0 to 17). Hospital admissions due to respiratory issues for adults age 65-99 and non-accidental mortality have lower incidence increases (0.09 and 0.05 respectively).

It should be noted, however, that the estimated increases in those health effect incidences are quite minor compared to the background health incidence (shown in Table 2-4 as percent of Background Health Incidence). For example, the increase in asthma emergency room visits represents 0.001% of the total asthma-related emergency room visits for children.

Table 2-4. BenMAP-Estimated Mean Ozone Health Effects of the Project Emissions Across the Northern California Model Domain[1]

Health Endpoint[2]	Incidences (Mean)	Percent of Background Health Incidence (%)
Hospital Admissions, All Respiratory [65-99]	0.09	0.0001%
Mortality, Non-Accidental [0-99]	0.05	0.00003%
Emergency Room Visits, Asthma [0-17]	0.47	0.001%
Emergency Room Visits, Asthma [18-99]	0.70	0.001%

[1] Health effects are shown terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences) values.

[2] Affected age ranges are shown in square brackets.

2.3 Conclusion

The $PM_{2.5}$ and ozone concentration changes modeled by CAMx were converted to health effects on various health endpoints including premature mortality, hospitalizations, and emergency room visits, using the BenMAP health effects assessment model and USEPA defaults for health endpoints. Estimated changes in the health effect incidences are presented across the grids in the Northern California model domain. Across the board, the estimated increases in those health effect incidences are quite minor compared to the background health incidence values with the largest $PM_{2.5}$ health effect (all-cause mortality) representing only 0.0002% of the total of all deaths, and the largest health effect for ozone (asthma related emergency room visits by children) representing 0.001% of all emergency room visits. For the $PM_{2.5}$-related health endpoints, the health effect on mortality is the highest (Incidence = 0.59). For ozone-related health endpoints, asthma related emergency room visits are most affected (Incidence = 0.70 for adults ages 18 to 99 and Incidence = 0.47 for children ages 0 to 17). Other health effect incidences are lower. When taken into context, the small increase in incidences and the very small percent of the number of background incidences indicate that these health effects are negligible in a developed, urban environment.

Health effects presented above conservatively utilize combined operational emissions at full Project buildout together with average daily construction emissions. In reality, any overlapping years of construction and operation would have lower operational emissions. Additionally, operational emissions reflect the higher of the two design alternatives being considered (the residential heavy option), and conservatively utilize the first year of potential residency (year 2024) for emission factors, while full Project build out is expected in year 2028.

Uncertainty

The approach and methodology of this analysis ensures that the uncertainty is of a conservative nature. In addition to the conservative assumptions built into the emissions noted above, there are a number of assumptions built into the application of C-R functions in BenMAP that may lead to an overestimation of health effects. For example, for all-cause mortality health effects from $PM_{2.5}$, these estimates are based on a single epidemiological study that found an association between $PM_{2.5}$ concentrations and mortality. While similar studies suggest that such an association exists, there remains uncertainty regarding a clear causal link. This uncertainty stems from the limitations of epidemiological studies, such as inadequate exposure estimates and the inability to control for many factors that could explain the association between $PM_{2.5}$ and mortality such as lifestyle factors like smoking. Several reviews have evaluated the scientific evidence of health effects from specific particulate components (e.g., Rohr and Wyzga 2012; Lippmann and Chen, 2009; Kelly and Fussell, 2007). These reviews indicate that the evidence is strongest for combustion-derived components of PM including elemental carbon (EC), organic carbon (OC) and various metals (e.g., nickel and vanadium), however, there is still no definitive data that points to any particular component of PM as being more toxic than other components. The USEPA has also stated that results from various studies have shown the importance of considering particle size, composition, and particle source in determining the health effects of PM (USEPA, 2009). Further, the USEPA (2009) found that studies have reported that particles from industrial sources and from coal combustion appear to be the most significant contributors to PM-related mortality, consistent with the findings by Rohr and Wyzga (2012) and others. This is particularly important to note here, as a large portion of PM emissions generated from the Project are from entrained roadway dust (see Appendix A), and not from combustion. Therefore, because they do not consider the relative toxicity of PM components, the results presented here are conservative.

For both the PM2.5 and ozone health effects calculated, each of the pollutants may be a confounder of the other. Thus, while the C-R functions are from studies that evaluated the effects for each pollutant individually, both air pollutants could contribute to the health effect outcomes evaluated, and thus the overall impacts may be overstated.

Another uncertainty highlighted by the USEPA (2012) that applies to potential health effects from both $PM_{2.5}$ and ozone, is the assumption of a log-linear response between exposure and health effects, without consideration for a threshold below which effects may not be measurable. The issue of a threshold for $PM_{2.5}$ and ozone is highly debatable and can have significant implications for health effects analyses as it requires consideration of current air pollution levels and calculating effects only for areas that exceed threshold levels. Without consideration of a threshold, any incremental contribution to existing ambient air pollution levels, whether below or above the applicable threshold for a given criteria pollutant, is assumed to adversely affect health. Although the USEPA traditionally does not consider thresholds in its cost-benefit analyses, the NAAQS itself is a health-based threshold level that the USEPA has developed based on evaluating the most current evidence of health effects.

As noted above, the health effects estimation using this method presumes that effects seen at large concentration differences can be linearly scaled down to (i.e., correspond to) small increases in concentration, with no consideration of potential thresholds below which health effects may not occur. This methodology of linearly scaling health effects is broadly accepted for use in regulatory evaluations and is considered as being health protective (USEPA, 2010), but potentially overstates the potential effects. In summary, health effects presented in this report are conservatively estimated, and the actual effects may be zero.

3. REFERENCES

/1/ Kelly, F.J., J.C. Fussell, 2007. Particulate Toxicity Ranking Report. Report Number 2/07. Environmental Research Group, Kings College, London.

/2/ Lippmann, M., L.C. Chen, 2009. Health effects of concentrated ambient air particulate matter (CAPs) and its components. *Crit. Rev. Toxicol*., 39, 865e913.

/3/ Rohr A.C., R.E. Wyzga, 2012. Attributing Health Effects to Individual Particulate Matter Constituents. *Atmos Environ*., 62, 130-152. doi:10.1016/j.atmosenv.07.036.

/4/ USEPA, 2009. Integrated Science Assessment (ISA) For Particulate Matter (Final Report, Dec 2009). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=216546

/5/ USEPA, 2010. Quantitative Health Risk Assessment for Particulate Matter. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency. EPA-452/R-10-005. June 2010. Available: https://www3.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf

/6/ USEPA, 2012. Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter. U.S. Environmental Protection Agency, Washington, DC, EPA-452/R-12-005. https://www3.epa.gov/ttn/ecas/docs/ria/naaqs-pm_ria_final_2012-12.pdf.

/7/ USEPA, 2014. Health Risk and Exposure Assessment for Ozone Final Report. Risk and Benefits Group, Health and Environmental Impacts Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency.EPA-452/R-14-004a.

/8/ USEPA, 2018. BenMAP Environmental Benefits Mapping and Analysis Program – Community Edition User's Manual. United States Environmental Protection Agency. Available at: https://www.epa.gov/benmap/benmap-ce-manual-and-appendices.

FRIANT RANCH MEMO

ENVIRONMENT
& HEALTH

MEMO

Date: February 14, 2020

To: Bibiana Alvarez, Project Manager, Analytical Environmental Services

From: Shari Beth Libicki, PhD

Taylor Vencill, MS, PE

Subject: FRIANT RANCH EVALUATION, COMPARISON OF MODELED AND CURRENT EMISSIONS

POINT MOLATE, RICHMOND, CALIFORNIA

Ramboll
201 California Street
Suite 201
San Francisco, CA 94111
USA

T +1 415 796 1950
F +1 415 398 5812
www.ramboll.com

Ramboll US Corporation (Ramboll) completed an evaluation of the potential health effects of the emissions of criteria pollutants that may result from the adoption and implementation of the Point Molate Project (the proposed Project), herein referred to as the "Friant Ranch Evaluation". Since the completion of the Friant Ranch Evaluation (modeling completed in October, 2019), emission estimates for the Project have changed, including proposed mitigation measures. This memorandum documents why the technical evaluation already completed serves as a conservative representation of potential health effects associated with the proposed Project.

BACKGROUND OF FRIANT RANCH EVALUATION

In December 2018, the California Supreme Court issued its decision in Sierra Club v. County of Fresno (2018) 6 Cal.5th 502 (hereinafter referred to as "the Friant Ranch decision"). The Court noted that the EIR at issue in the Friant Ranch decision disclosed the project's significant impacts attributable to the emissions of criteria pollutants, including oxides of nitrogen (NOx), and particulate matter (PM), but did not correlate the project's emissions to health effects. In finding the EIR inadequate in that respect, the Court held that the EIR should have "relate[d] the expected adverse air quality impacts to likely health consequences or explain[ed] in meaningful detail why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of" the project. (Id. at p. 510.)

In response to the Friant Ranch decision, Ramboll evaluated the potential health effects of criteria air pollutants associated with the proposed Project. The health effects evaluation completed used models explicitly approved for use by the USEPA for regional air modeling and health impacts, along with information provided by the California air quality districts. It combined spatially and temporally allocated emissions, photochemical grid modeling, and the application of concentration-health response functions (through the BenMAP program) to quantify health effects

from incremental ozone and fine particulate matter concentrations resulting from the proposed Project.

COMPARISON OF EMISSIONS MODELED

The health effects resulting from criteria pollutant emissions, as analysed using the methods described above, are typically lower if the pollutant emissions are lower. However, both the quantity and location of the emissions modeled affect the estimated health effects. For example, if overall emissions are reduced, but emissions near populated areas are increased, the overall health effects predicted by the analysis may increase. Thus, below we compare emissions previously modeled against current estimates of unmitigated Project emissions, both in total, and split by model grid cells over land versus water. This is important as emissions modeled over land are closer to populated areas and thus have a greater effect on resulting health effect estimates.

As shown in the table below, emissions over both land-based and water-based model grid cells decrease. Further, emissions decrease over both the Project grid cell as well as the surrounding land-based grid cells where populations are higher. All grid cells over water see reductions in emissions.

Both modeled (unmitigated) emissions and current mitigated emissions estimates reflect the emissions from the residential heavy buildout scenario (the higher of the two buildout scenarios considered).

Location of Emissions	Modeled Emissions (lbs/day)						Current (Mitigated) Emissions (lbs/day)					
	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Land-Based Cells	81	66	205	1	37	11	66	63	187	1	34	10
Water-Based Cells	10	68	54	0.1	6	3	2	19	27	0.1	3	1
Total	92	135	259	1	43	15	68	82	213	1	37	11

Location of Emissions	Difference (lbs/day)					
	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Land-Based Cells	-15.3	-3.1	-18.0	-0.1	-3.1	-1.0
Water-Based Cells	-8.5	-49.9	-27.2	-0.03	-2.4	-2.2
Total	-23.8	-53.0	-45.2	-0.1	-5.5	-3.2

CONCLUSION

Current mitigated emissions, in total, and when split by land versus water, are lower than previously modeled emissions. Thus, it can be concluded that the current assessment serves as a conservative estimate of potential health effects associated with the proposed Project.