# Appendix D

## Air Quality and Greenhouse Gas Modeling Data

**CalEEMod Inputs (Construction Run)**

| | |
|---|---|
| **Name:** | DGS Unruh Building Renovation |
| **Project Number:** | 18010209.01 |
| **Project Location:** | 915 Capitol Mall, Sacramento |
| **County/Air Basin:** | Sacramento |
| **Climate Zone:** | 6 |
| **Land Use Setting:** | Urban |
| **Operational Year:** | 2024 |
| **Utility Company:** | Sacramento Municipal Utility District |
| **Air Basin:** | Sacramento Valley Air Basin |
| **Air District:** | SMAQMD |

| | |
|---|---|
| **Proiect Site Acreage** | 2.8 |
| **Disturbed Site Acreage** | 0.63 |

| Land Use | SQFT | Acres |
|---|---|---|
| Office Building | 164,600 | 0.63 |
| | **164,600** | **0.63** |

**CalEEMod Land Use Inputs -- Construction**

| Land Use | Land Use Type | Land Use Subtype | Unit Amount | Size Metric | Lot Acreage | Square Feet |
|---|---|---|---|---|---|---|
| Office Building | Commercial | Government Office Building | 164.6 | 1000 Sq. Feet | 0.63 | 164,600 |
| | | | | | **0.63** | |

**Demolition Haul Data***

| Component | Amount to be Demolished (Ton)* | Haul Truck Capacity (Ton) | Haul Distance (miles) | Total Trip Ends | Duration (days) | Trip Ends/ day |
|---|---|---|---|---|---|---|
| Building Demo* | 8,849 | 15 | 20 | 1,167 | 68 | 35 |
| Fountain Demo | 27 | 15 | 21 | 4 | 68 | 1 |
| **Total** | 8,876 | | | **1,171** | | |

*Based on cubic yards provided by the applicant.

**Building Modernization Haul Data***

| Component | Amount to be Hauled (Ton)* | Haul Truck Capacity (Ton) | Haul Distance (miles) | Total Trip Ends | Duration (days) | Trip Ends/ day |
|---|---|---|---|---|---|---|
| Building Material* | 8,849 | 15 | 20 | 1,167 | 682 | 4 |
| **Total** | 8,849 | | | **1,167** | | |

*Based on cubic yards provided by the applicant.

**Architectural Coating**

| | |
|---|---|
| Interior Paint VOC content: | 100 |
| Exterior Paint VOC content: | 100 |

**Non-Residential Architectural Coating**

| | |
|---|---|
| Percentage of Buildings' Interior Painted: | 100% |
| Percentage of Buildings' Exterior Painted: | 100% |

| Structure Type | Land Use Square Feet | CalEEMod Application Factor | Total Paintable Surface Area[1] | Paintable Interior Area[2] | Paintable Exterior Area[2] |
|---|---|---|---|---|---|
| **Non-Residential** | | | | | |
| Office Building | 164,600 | 2.0 | 329,200 | 246,900 | 82,300 |

*[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.*

*[2] The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.*

**CalEEMod Construction Phase Inputs***

5-Day Work Week/8 hours per day

**Adjusted Phasing for 3-year phasing**

| | Default | Adjusted |
|---|---|---|
| Demolition | 20 | 68 |
| Building Construction | 200 | 682 |
| Arch Coating | 10 | 34 |
| | | |
| Construction Start Date | 12/1/2020 | |
| Construction End Date | 12/1/2023 | |
| Total Work Days | 784 | |

**CalEEMod Construction Schedule Inputs**

| Phase Name | Phase Type | Start Date | End Date | CalEEMod Total Days |
|---|---|---|---|---|
| Demolition | Demolition | 12/1/2020 | 3/4/2021 | 68 |
| Building Modernization | Building Construction | 3/5/2021 | 10/16/2023 | 682 |
| Architectural Coating | Architectural Coating | 10/17/2023 | 12/1/2023 | 34 |
| | | | | 784 |

*Based on overall construction schedule of 3-years provided by the Applicant, CalEEMod default phase lengths were normalized to meet 3-year period

**CalEEMod Construction Off-Road Equipment Inputs**

| Applicant Equipment Type | # of Equipment | HP | Tier Rating | Hrs/ Day | Trips |
|---|---|---|---|---|---|
| **Demolition** | | | | | |
| Concrete/Industrial Saws | 1 | 81 | | 8 | |
| Rubber Tired Dozers | 1 | 247 | | 1 | |
| Tractors/Loaders/Backhoes | 2 | 97 | | 6 | |
| Worker Trips | | | | | 160 |
| Vendors Trips | | | | | 0 |
| Hauling Trips | | | | | 1,171 |
| **Building Modernization** | | | | | |
| Cranes | 1 | 231 | | 4 | |
| Forklifts | 2 | 89 | | 6 | |
| Tractors/Loaders/Backhoes | 2 | 97 | | 8 | |
| Worker Trips | | | | | 160 |
| Vendor Trips[1] | | | | | 27 |
| Hauling Trips | | | | | 1,167 |
| **Architectural Coating** | | | | | |
| Air Compressor | 1 | 78 | | 6 | |
| Worker Trips | | | | | 160 |
| Vendor Trips | | | | | 0 |
| Hauling Trips | | | | | 0 |

**Demo Haul Trip Calculation**

*Conversion factors**

| | |
|---|---|
| 0.046 | ton/SF |
| 1.2641662 | tons/cy |
| 20 | tons |
| 15.82070459 | CY |
| 0.791035229 | CY/ton |

**Building Demoltion Haul Trips (BSF and Haul Truck (CY) given)**

| | Demo Capacity | Tons/cy | Tons | Haul Truck (Ton) | Round Trips | Total Trip Ends |
|---|---|---|---|---|---|---|
| Building | 7,000 | 1.2641662 | 8,849 | 15 | 583 | 1167 |
| Fountain | 585 | 0.046 | 27 | 15 | 2 | 4 |

*CalEEMod User's Guide Version 2016.3.2, Appendix A

**CalEEMod Inputs (Operation Run)**

| | |
|---|---|
| **Name:** | DGS Unruh Building Renovation |
| **Project Number:** | 18010209.01 |
| **Project Location:** | 915 Capitol Mall, Sacramento |
| **County/Air Basin:** | Sacramento |
| **Climate Zone:** | 6 |
| **Land Use Setting:** | Urban |
| **Operational Year:** | 2024 |
| **Utility Company:** | Sacramento Municipal Utility District |
| **Air Basin:** | Sacramento Valley Air Basin |
| **Air District:** | SMAQMD |

| | |
|---|---|
| **Proiect Site Acreage**[1] | 2.8 |
| **Disturbed Site Acreage**[1] | 0.63 |

| | |
|---|---|
| Existing Employees | 470 |
| Projected Employees | 517 |
| Project Employees | 47 |

| Land Use | SQFT | Acres |
|---|---|---|
| Office Building | 164,600 | 0.63 |
| | **164,600** | **0.63** |

**CalEEMod Land Use Inputs -- Construction**

| Land Use | Land Use Type | Land Use Subtype | Unit Amount | Size Metric | Lot Acreage | Square Feet |
|---|---|---|---|---|---|---|
| Office Building | Commercial | Government Office Building | 164.6 | 1000 Sq. Feet | 0.63 | 164,600 |
| | | | | | **0.63** | |

**Trip Generation**

| | Daily VMT per Employee | Total Project Daily VMT | Annual VMT per Employee | Total Project Annual VMT |
|---|---|---|---|---|
| Regional Average[1] | 21.83 | 1,026.01 | 5,544.82 | 260,606.54 |

| Land Use | Average Daily Trip Rate | | |
|---|---|---|---|
| | weekday | Saturday | Sunday |
| Government Office Building | 14.76852977 | 0 | 0 |

| Land Use | Miles | | | Trip % | | | Trip Purpose | | |
|---|---|---|---|---|---|---|---|---|---|
| | H-w or C-W | H-S or C-C | H-O or C-O | H-w or C-W | H-S or C-C | H-O or C-O | Primary | Diverted | Pass-by |
| Government Office Building | 1.00 | 0.50 | 0.75 | 33.0% | 62.0% | 5.0% | 50.0% | 34.0% | 16.0% |

[1] City of Sacramento, Central City Specific Plan. 2018. http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Major-Projects/Central-City-Specific-Plan/Final-docs/CCSP_Certified_EIR_April2018_WEB.pdf?la=en

**Water Use**

| | Existing Use (gal/day)[1] | Existing Use (gal/year) | Existing Use + Project (10% increase) (gal/year) | Project Change (gal/year) |
|---|---|---|---|---|
| Government Office Building | 8,750 | 3,193,750 | 3,513,125 | 319,375 |

| | |
|---|---|
| Septic Tank | 0% |
| Aerobic | 100% |
| Facultative Lagoons | 0% |

[1] Wilburn, Paul. California Department of General Services. 2019. May 3, 2019 – email conversation with Suzanne Enslow of Ascent Environmental regarding existing potable water demand at the Unruh Building. (see file for admin record here)

**Solid Waste**

| | Employees | Solid Waste Generation (tons/employee/year)[1] | Total (tons/year) |
|---|---|---|---|
| Government Office Building | 47 | 0.59 | 27.73 |

[1] CalRecycle.1990. Institutional Sector (Government) Sector Rate. https://www2.calrecycle.ca.gov/wastecharacterization/general/rates

**Stationary Sources**

| | # of Equipment | Fuel Type | kW[1] | HP | Hours/Yr[2] |
|---|---|---|---|---|---|
| Emergency Generator | 1 | Diesel | 650 | 871 | 500 |

[1] Existing Unruh generator (100kW) will be replaced with a 750kW generator.

[2] 500 hours per year is maximum capacity of most generators.

**Water Mitigation**

| | | |
|---|---|---|
| Install Low Flow Bathroom Faucet | 32 | % Reduction in flow |
| Install Low Flow Kitchen Faucet | 18 | % Reduction in flow |
| Install Low Flow Toilet | 20 | % Reduction in flow |
| Install Low Flow Shower | 20 | % Reduction in flow |
| Use Water Efficiency Irrigation System | 6.1 | % Reduction in flow |

**Energy Mitigation**

**On-site Renewable Energy**

| | Alternative Energy | |
|---|---|---|
| % of Electricty Use Generated | 100% | kWh Generated |

*Under contract with SMUD.

**Solid Waste Mitigation**

**Institute Recycling and Composting services**

| | |
|---|---|
| % Reduction in waste disposed | 50% |

## CalEEMod VMT Calculator (UNMITIGATED SCENARIO)

This calcultor was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

### Trip Type

**CalEEMod defaults based on land uses inputted**

| Land Use | Miles | | | Trip % | | | Trip Purpose | | |
|---|---|---|---|---|---|---|---|---|---|
| | H-w or C-W | H-S or C-C | H-O or C-O | H-w or C-W | H-S or C-C | H-O or C-O | Primary | Diverted | Pass-by |
| Government Office Building | 10.00 | 5.00 | 6.50 | 33.0% | 62.0% | 5.0% | 50.0% | 34.0% | 16.0% |

### Total Trips

***Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)***

**Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated**

| Land Use | Average Daily Trip Rate | | | |
|---|---|---|---|---|
| | weekday | Saturday | Sunday | Total Trips (weekly) |
| Government Office Building | 11345.88 | 0 | 0 | **56729.4** |

### Trip Length Calc

***AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1***

**Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod**

Land Use

| **Government Office Building** | link % primary | trip length primary | link % diverted | Constant (0.25) | trip length primary | link % passby | constant | Trip Length |
|---|---|---|---|---|---|---|---|---|
| H-W or c-w | 50.0% | 10.00 | 34.0% | 0.25 | 10 | 16.0% | 0.1 | 5.9 |
| h-s or c-c | 50.0% | 5.00 | 34.0% | 0.25 | 5 | 16.0% | 0.1 | 2.9 |
| h-o or c-o | 50.0% | 6.50 | 34.0% | 0.25 | 6.5 | 16.0% | 0.1 | 3.8 |

### VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

| **Government Office Building** | **# trips** | **trip length** | **Weekly VMT** | **Annual VMT** |
|---|---|---|---|---|
| H-W or c-w | 18,721 | 5.9 | 109,816 | |
| h-s or c-c | 35,172 | 2.9 | 103,442 | |
| h-o or c-o | 2,836 | 3.8 | 10,831 | |
| Total VMT | | | 224,088 | 11,652,587.50 |

### Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

| | | | | |
|---|---|---|---|---|
| Summed Weekly VMT from Each Land Use | 224,088.22 | | | |
| Weeks per Year CalEEMod Uses for Annual VMT | 52.00 | | 52.0000 | 52.14285714 |
| Calculated Annual VMT | **11,652,588** | 11,652,588 | | |
| | | 31,925 | | |

## CalEEMod VMT Calculator (MITIGATED SCENARIO)

This calcultor was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculateds the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the MITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

**Daily VMT Provided by Central City Specific Plan** **1,026**

**Annual VMT** **260,607**

### Trip Type

CalEEMod defaults based on land uses inputted

| Land Use | Miles | | | Trip % | | | Trip Purpose | | |
|---|---|---|---|---|---|---|---|---|---|
| | H-w or C-W | H-S or C-C | H-O or C-O | H-w or C-W | H-S or C-C | H-O or C-O | Primary | Diverted | Pass-by |
| Government Office Build | 1.00 | 0.50 | 0.75 | 33.0% | 62.0% | 5.0% | 50.0% | 34.0% | 16.0% |

### Total Trips

***Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)***

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

| Land Use | Average Daily Trip Rate | | | |
|---|---|---|---|---|
| | weekday | Saturday | Sunday | Total Trips (weekly) |
| Government Office Build | 2430.9 | 0 | 0 | **12154.5** |

### Trip Length Calc

***AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1***

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use

| Government Office Buil | link % primary | trip length primary | link % diverted | Constant (0.25) | trip length primary | link % passby | constant | Trip Length |
|---|---|---|---|---|---|---|---|---|
| H-W or c-w | 50.0% | 1.00 | 34.0% | 0.25 | 1 | 16.0% | 0.1 | 0.6 |
| h-s or c-c | 50.0% | 0.50 | 34.0% | 0.25 | 0.5 | 16.0% | 0.1 | 0.3 |
| h-o or c-o | 50.0% | 0.75 | 34.0% | 0.25 | 0.75 | 16.0% | 0.1 | 0.5 |

### VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for

| Government Office Buil | # trips | trip length | Weekly VMT | Annual VMT |
|---|---|---|---|---|
| H-W or c-w | 4,011 | 0.6 | 2,411 | |
| h-s or c-c | 7,536 | 0.3 | 2,325 | |
| h-o or c-o | 608 | 0.5 | 276 | |
| Total VMT | | | 5,012 | 260,611.32 |

### Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

| | | | | |
|---|---|---|---|---|
| Summed Weekly VMT from Each Land Use | 5,011.76 | | | |
| Weeks per Year CalEEMod Uses for Annual VMT | 52.00 | | 52.0000 | 52.14285714 |
| Calculated Annual VMT | **260,611** | 260,611 | | |
| | | 4.78 | | |

DGS Unruh Building Renovation - Construction - Sacramento County, Annual

# DGS Unruh Building Renovation - Construction

**Sacramento County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Government Office Building | 164.60 | 1000sqft | 0.63 | 164,600.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 3.5 | **Precipitation Freq (Days)** | 58 |
| **Climate Zone** | 6 | | | **Operational Year** | 2024 |
| **Utility Company** | Sacramento Municipal Utility District | | | | |
| **CO2 Intensity (lb/MWhr)** | 590.31 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics -

Land Use - Lot acreage adjusted based on 6-story building

Construction Phase - Adjusted schedule based on 3-year construction duration

Off-road Equipment - No heavy-duty equipment

Off-road Equipment - No heavy-duty equipment

Off-road Equipment - No heavy-duty equipment

Trips and VMT - Adjusted demo haul trips based on truck hauling capacity. Added building construction material hauling trips.

Demolition - Building and fountain demo included

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 5.00 | 34.00 |

| | | | |
|---|---|---|---|
| tblConstructionPhase | NumDays | 100.00 | 682.00 |
| tblConstructionPhase | NumDays | 10.00 | 68.00 |
| tblLandUse | LotAcreage | 3.78 | 0.63 |
| tblTripsAndVMT | HaulingTripNumber | 878.00 | 1,171.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,167.00 |
| tblTripsAndVMT | WorkerTripNumber | 10.00 | 160.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 160.00 |
| tblTripsAndVMT | WorkerTripNumber | 11.00 | 160.00 |

# 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 | | | | | |
| 2020 | 0.0184 | 0.1521 | 0.1515 | 4.3000e-004 | 0.0553 | 5.6700e-003 | 0.0609 | 0.0108 | 5.4100e-003 | 0.0162 | 0.0000 | 39.0945 | 39.0945 | 3.4800e-003 | 0.0000 | 39.1816 |
| 2021 | 0.1872 | 1.5221 | 1.5975 | 4.1100e-003 | 0.2532 | 0.0599 | 0.3131 | 0.0601 | 0.0555 | 0.1156 | 0.0000 | 374.4561 | 374.4561 | 0.0492 | 0.0000 | 375.6855 |
| 2022 | 0.1683 | 1.3504 | 1.5149 | 3.9000e-003 | 0.1816 | 0.0504 | 0.2321 | 0.0487 | 0.0464 | 0.0952 | 0.0000 | 354.5087 | 354.5087 | 0.0507 | 0.0000 | 355.7766 |
| 2023 | 0.8968 | 0.9796 | 1.2432 | 3.2600e-003 | 0.1654 | 0.0355 | 0.2009 | 0.0443 | 0.0328 | 0.0771 | 0.0000 | 295.8829 | 295.8829 | 0.0402 | 0.0000 | 296.8866 |
| **Maximum** | **0.8968** | **1.5221** | **1.5975** | **4.1100e-003** | **0.2532** | **0.0599** | **0.3131** | **0.0601** | **0.0555** | **0.1156** | **0.0000** | **374.4561** | **374.4561** | **0.0507** | **0.0000** | **375.6855** |

### 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 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 0.0184 | 0.1521 | 0.1515 | 4.3000e-004 | 0.0553 | 5.6700e-003 | 0.0609 | 0.0108 | 5.4100e-003 | 0.0162 | 0.0000 | 39.0945 | 39.0945 | 3.4800e-003 | 0.0000 | 39.1815 |
| 2021 | 0.1872 | 1.5221 | 1.5975 | 4.1100e-003 | 0.2532 | 0.0599 | 0.3131 | 0.0601 | 0.0555 | 0.1156 | 0.0000 | 374.4560 | 374.4560 | 0.0492 | 0.0000 | 375.6854 |
| 2022 | 0.1683 | 1.3504 | 1.5149 | 3.9000e-003 | 0.1816 | 0.0504 | 0.2321 | 0.0487 | 0.0464 | 0.0952 | 0.0000 | 354.5085 | 354.5085 | 0.0507 | 0.0000 | 355.7765 |
| 2023 | 0.8968 | 0.9796 | 1.2432 | 3.2600e-003 | 0.1654 | 0.0355 | 0.2009 | 0.0443 | 0.0328 | 0.0771 | 0.0000 | 295.8828 | 295.8828 | 0.0402 | 0.0000 | 296.8865 |
| **Maximum** | **0.8968** | **1.5221** | **1.5975** | **4.1100e-003** | **0.2532** | **0.0599** | **0.3131** | **0.0601** | **0.0555** | **0.1156** | **0.0000** | **374.4560** | **374.4560** | **0.0507** | **0.0000** | **375.6854** |

| | ROG | NOx | 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** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **12-1-2020** | **2-28-2021** | 0.4548 | 0.4548 |
| **2** | **3-1-2021** | **5-31-2021** | 0.4283 | 0.4283 |
| **3** | **6-1-2021** | **8-31-2021** | 0.4263 | 0.4263 |
| **4** | **9-1-2021** | **11-30-2021** | 0.4237 | 0.4237 |
| **5** | **12-1-2021** | **2-28-2022** | 0.3923 | 0.3923 |
| **6** | **3-1-2022** | **5-31-2022** | 0.3844 | 0.3844 |
| **7** | **6-1-2022** | **8-31-2022** | 0.3836 | 0.3836 |
| **8** | **9-1-2022** | **11-30-2022** | 0.3811 | 0.3811 |
| **9** | **12-1-2022** | **2-28-2023** | 0.3514 | 0.3514 |
| **10** | **3-1-2023** | **5-31-2023** | 0.3438 | 0.3438 |
| **11** | **6-1-2023** | **8-31-2023** | 0.3432 | 0.3432 |
| **12** | **9-1-2023** | **9-30-2023** | 0.1119 | 0.1119 |
| | | **Highest** | 0.4548 | 0.4548 |

## 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 | 12/1/2020 | 3/4/2021 | 5 | 68 |
| 2 | Building Construction | Building Construction | 3/5/2021 | 10/16/2023 | 5 | 682 |
| 3 | Architectural Coating | Architectural Coating | 10/17/2023 | 12/1/2023 | 5 | 34 |

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 246,900; Non-Residential Outdoor: 82,300; Striped Parking**

**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 | Rubber Tired Dozers | 1 | 1.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 2 | 6.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 4 | 160.00 | 0.00 | 1,171.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 160.00 | 27.00 | 1,167.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 160.00 | 0.00 | 0.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**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 | | | | | 0.0335 | 0.0000 | 0.0335 | 5.0700e-003 | 0.0000 | 5.0700e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 9.9700e-003 | 0.0905 | 0.0877 | 1.4000e-004 | | 5.3700e-003 | 5.3700e-003 | | 5.1300e-003 | 5.1300e-003 | 0.0000 | 11.9687 | 11.9687 | 2.2600e-003 | 0.0000 | 12.0253 |
| **Total** | **9.9700e-003** | **0.0905** | **0.0877** | **1.4000e-004** | **0.0335** | **5.3700e-003** | **0.0389** | **5.0700e-003** | **5.1300e-003** | **0.0102** | **0.0000** | **11.9687** | **11.9687** | **2.2600e-003** | **0.0000** | **12.0253** |

## 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 | 1.5200e-003 | 0.0569 | 0.0129 | 1.6000e-004 | 8.2600e-003 | 2.0000e-004 | 8.4600e-003 | 2.1200e-003 | 1.9000e-004 | 2.3200e-003 | 0.0000 | 15.1523 | 15.1523 | 8.8000e-004 | 0.0000 | 15.1743 |
| 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 | 6.8500e-003 | 4.6500e-003 | 0.0509 | 1.3000e-004 | 0.0135 | 1.0000e-004 | 0.0136 | 3.5900e-003 | 9.0000e-005 | 3.6800e-003 | 0.0000 | 11.9735 | 11.9735 | 3.4000e-004 | 0.0000 | 11.9820 |
| **Total** | **8.3700e-003** | **0.0616** | **0.0638** | **2.9000e-004** | **0.0218** | **3.0000e-004** | **0.0221** | **5.7100e-003** | **2.8000e-004** | **6.0000e-003** | **0.0000** | **27.1258** | **27.1258** | **1.2200e-003** | **0.0000** | **27.1563** |

## 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 | | | | | 0.0335 | 0.0000 | 0.0335 | 5.0700e-003 | 0.0000 | 5.0700e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 9.9700e-003 | 0.0905 | 0.0877 | 1.4000e-004 | | 5.3700e-003 | 5.3700e-003 | | 5.1300e-003 | 5.1300e-003 | 0.0000 | 11.9687 | 11.9687 | 2.2600e-003 | 0.0000 | 12.0252 |
| **Total** | **9.9700e-003** | **0.0905** | **0.0877** | **1.4000e-004** | **0.0335** | **5.3700e-003** | **0.0389** | **5.0700e-003** | **5.1300e-003** | **0.0102** | **0.0000** | **11.9687** | **11.9687** | **2.2600e-003** | **0.0000** | **12.0252** |

## 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 | 1.5200e-003 | 0.0569 | 0.0129 | 1.6000e-004 | 8.2600e-003 | 2.0000e-004 | 8.4600e-003 | 2.1200e-003 | 1.9000e-004 | 2.3200e-003 | 0.0000 | 15.1523 | 15.1523 | 8.8000e-004 | 0.0000 | 15.1743 |
| 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 | 6.8500e-003 | 4.6500e-003 | 0.0509 | 1.3000e-004 | 0.0135 | 1.0000e-004 | 0.0136 | 3.5900e-003 | 9.0000e-005 | 3.6800e-003 | 0.0000 | 11.9735 | 11.9735 | 3.4000e-004 | 0.0000 | 11.9820 |
| **Total** | **8.3700e-003** | **0.0616** | **0.0638** | **2.9000e-004** | **0.0218** | **3.0000e-004** | **0.0221** | **5.7100e-003** | **2.8000e-004** | **6.0000e-003** | **0.0000** | **27.1258** | **27.1258** | **1.2200e-003** | **0.0000** | **27.1563** |

## 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 | | | | | 0.0655 | 0.0000 | 0.0655 | 9.9200e-003 | 0.0000 | 9.9200e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0179 | 0.1632 | 0.1703 | 2.7000e-004 | | 9.1700e-003 | 9.1700e-003 | | 8.7400e-003 | 8.7400e-003 | 0.0000 | 23.4210 | 23.4210 | 4.3600e-003 | 0.0000 | 23.5301 |
| **Total** | **0.0179** | **0.1632** | **0.1703** | **2.7000e-004** | **0.0655** | **9.1700e-003** | **0.0747** | **9.9200e-003** | **8.7400e-003** | **0.0187** | **0.0000** | **23.4210** | **23.4210** | **4.3600e-003** | **0.0000** | **23.5301** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.7600e-003 | 0.1022 | 0.0234 | 3.0000e-004 | 9.0500e-003 | 3.5000e-004 | 9.4000e-003 | 2.4100e-003 | 3.4000e-004 | 2.7500e-003 | 0.0000 | 29.3013 | 29.3013 | 1.6900e-003 | 0.0000 | 29.3436 |
| 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 | 0.0125 | 8.1500e-003 | 0.0911 | 2.5000e-004 | 0.0264 | 1.8000e-004 | 0.0266 | 7.0300e-003 | 1.7000e-004 | 7.2000e-003 | 0.0000 | 22.6288 | 22.6288 | 5.9000e-004 | 0.0000 | 22.6437 |
| **Total** | **0.0152** | **0.1104** | **0.1145** | **5.5000e-004** | **0.0355** | **5.3000e-004** | **0.0360** | **9.4400e-003** | **5.1000e-004** | **9.9500e-003** | **0.0000** | **51.9302** | **51.9302** | **2.2800e-003** | **0.0000** | **51.9873** |

### 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 | | | | | 0.0655 | 0.0000 | 0.0655 | 9.9200e-003 | 0.0000 | 9.9200e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0179 | 0.1632 | 0.1703 | 2.7000e-004 | | 9.1700e-003 | 9.1700e-003 | | 8.7400e-003 | 8.7400e-003 | 0.0000 | 23.4210 | 23.4210 | 4.3600e-003 | 0.0000 | 23.5301 |
| **Total** | **0.0179** | **0.1632** | **0.1703** | **2.7000e-004** | **0.0655** | **9.1700e-003** | **0.0747** | **9.9200e-003** | **8.7400e-003** | **0.0187** | **0.0000** | **23.4210** | **23.4210** | **4.3600e-003** | **0.0000** | **23.5301** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.7600e-003 | 0.1022 | 0.0234 | 3.0000e-004 | 9.0500e-003 | 3.5000e-004 | 9.4000e-003 | 2.4100e-003 | 3.4000e-004 | 2.7500e-003 | 0.0000 | 29.3013 | 29.3013 | 1.6900e-003 | 0.0000 | 29.3436 |
| 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 | 0.0125 | 8.1500e-003 | 0.0911 | 2.5000e-004 | 0.0264 | 1.8000e-004 | 0.0266 | 7.0300e-003 | 1.7000e-004 | 7.2000e-003 | 0.0000 | 22.6288 | 22.6288 | 5.9000e-004 | 0.0000 | 22.6437 |
| **Total** | **0.0152** | **0.1104** | **0.1145** | **5.5000e-004** | **0.0355** | **5.3000e-004** | **0.0360** | **9.4400e-003** | **5.1000e-004** | **9.9500e-003** | **0.0000** | **51.9302** | **51.9302** | **2.2800e-003** | **0.0000** | **51.9873** |

## 3.3 Building Construction - 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 | | | | | |
| Off-Road | 0.0837 | 0.8624 | 0.7845 | 1.2300e-003 | | 0.0483 | 0.0483 | | 0.0445 | 0.0445 | 0.0000 | 108.0886 | 108.0886 | 0.0350 | 0.0000 | 108.9626 |
| **Total** | **0.0837** | **0.8624** | **0.7845** | **1.2300e-003** | | **0.0483** | **0.0483** | | **0.0445** | **0.0445** | **0.0000** | **108.0886** | **108.0886** | **0.0350** | **0.0000** | **108.9626** |

## 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 | 1.3200e-003 | 0.0488 | 0.0112 | 1.4000e-004 | 8.1800e-003 | 1.7000e-004 | 8.3500e-003 | 2.1000e-003 | 1.6000e-004 | 2.2600e-003 | 0.0000 | 13.9755 | 13.9755 | 8.1000e-004 | 0.0000 | 13.9957 |
| Vendor | 9.1700e-003 | 0.2983 | 0.0797 | 7.1000e-004 | 0.0171 | 8.2000e-004 | 0.0179 | 4.9300e-003 | 7.9000e-004 | 5.7200e-003 | 0.0000 | 68.4224 | 68.4224 | 3.9100e-003 | 0.0000 | 68.5202 |
| Worker | 0.0598 | 0.0391 | 0.4374 | 1.2000e-003 | 0.1269 | 8.9000e-004 | 0.1278 | 0.0338 | 8.2000e-004 | 0.0346 | 0.0000 | 108.6185 | 108.6185 | 2.8500e-003 | 0.0000 | 108.6897 |
| **Total** | **0.0703** | **0.3862** | **0.5282** | **2.0500e-003** | **0.1521** | **1.8800e-003** | **0.1540** | **0.0408** | **1.7700e-003** | **0.0426** | **0.0000** | **191.0163** | **191.0163** | **7.5700e-003** | **0.0000** | **191.2056** |

## 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 | 0.0837 | 0.8624 | 0.7845 | 1.2300e-003 | | 0.0483 | 0.0483 | | 0.0445 | 0.0445 | 0.0000 | 108.0885 | 108.0885 | 0.0350 | 0.0000 | 108.9624 |
| **Total** | **0.0837** | **0.8624** | **0.7845** | **1.2300e-003** | | **0.0483** | **0.0483** | | **0.0445** | **0.0445** | **0.0000** | **108.0885** | **108.0885** | **0.0350** | **0.0000** | **108.9624** |

## 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 | 1.3200e-003 | 0.0488 | 0.0112 | 1.4000e-004 | 8.1800e-003 | 1.7000e-004 | 8.3500e-003 | 2.1000e-003 | 1.6000e-004 | 2.2600e-003 | 0.0000 | 13.9755 | 13.9755 | 8.1000e-004 | 0.0000 | 13.9957 |
| Vendor | 9.1700e-003 | 0.2983 | 0.0797 | 7.1000e-004 | 0.0171 | 8.2000e-004 | 0.0179 | 4.9300e-003 | 7.9000e-004 | 5.7200e-003 | 0.0000 | 68.4224 | 68.4224 | 3.9100e-003 | 0.0000 | 68.5202 |
| Worker | 0.0598 | 0.0391 | 0.4374 | 1.2000e-003 | 0.1269 | 8.9000e-004 | 0.1278 | 0.0338 | 8.2000e-004 | 0.0346 | 0.0000 | 108.6185 | 108.6185 | 2.8500e-003 | 0.0000 | 108.6897 |
| **Total** | **0.0703** | **0.3862** | **0.5282** | **2.0500e-003** | **0.1521** | **1.8800e-003** | **0.1540** | **0.0408** | **1.7700e-003** | **0.0426** | **0.0000** | **191.0163** | **191.0163** | **7.5700e-003** | **0.0000** | **191.2056** |

## 3.3 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 | 0.0892 | 0.9134 | 0.9299 | 1.4800e-003 | | 0.0484 | 0.0484 | | 0.0445 | 0.0445 | 0.0000 | 130.1920 | 130.1920 | 0.0421 | 0.0000 | 131.2447 |
| **Total** | **0.0892** | **0.9134** | **0.9299** | **1.4800e-003** | | **0.0484** | **0.0484** | | **0.0445** | **0.0445** | **0.0000** | **130.1920** | **130.1920** | **0.0421** | **0.0000** | **131.2447** |

### 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 | 1.4900e-003 | 0.0538 | 0.0129 | 1.7000e-004 | 8.3300e-003 | 1.7000e-004 | 8.5100e-003 | 2.1500e-003 | 1.7000e-004 | 2.3200e-003 | 0.0000 | 16.6190 | 16.6190 | 9.5000e-004 | 0.0000 | 16.6428 |
| Vendor | 0.0102 | 0.3409 | 0.0885 | 8.5000e-004 | 0.0205 | 8.7000e-004 | 0.0214 | 5.9300e-003 | 8.3000e-004 | 6.7600e-003 | 0.0000 | 81.6363 | 81.6363 | 4.5700e-003 | 0.0000 | 81.7507 |
| Worker | 0.0673 | 0.0423 | 0.4838 | 1.3900e-003 | 0.1528 | 1.0400e-003 | 0.1538 | 0.0406 | 9.6000e-004 | 0.0416 | 0.0000 | 126.0614 | 126.0614 | 3.0800e-003 | 0.0000 | 126.1385 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.0790** | **0.4370** | **0.5851** | **2.4100e-003** | **0.1816** | **2.0800e-003** | **0.1837** | **0.0487** | **1.9600e-003** | **0.0507** | **0.0000** | **224.3167** | **224.3167** | **8.6000e-003** | **0.0000** | **224.5320** |

**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 | 0.0892 | 0.9134 | 0.9299 | 1.4800e-003 | | 0.0484 | 0.0484 | | 0.0445 | 0.0445 | 0.0000 | 130.1918 | 130.1918 | 0.0421 | 0.0000 | 131.2445 |
| **Total** | **0.0892** | **0.9134** | **0.9299** | **1.4800e-003** | | **0.0484** | **0.0484** | | **0.0445** | **0.0445** | **0.0000** | **130.1918** | **130.1918** | **0.0421** | **0.0000** | **131.2445** |

**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 | 1.4900e-003 | 0.0538 | 0.0129 | 1.7000e-004 | 8.3300e-003 | 1.7000e-004 | 8.5100e-003 | 2.1500e-003 | 1.7000e-004 | 2.3200e-003 | 0.0000 | 16.6190 | 16.6190 | 9.5000e-004 | 0.0000 | 16.6428 |
| Vendor | 0.0102 | 0.3409 | 0.0885 | 8.5000e-004 | 0.0205 | 8.7000e-004 | 0.0214 | 5.9300e-003 | 8.3000e-004 | 6.7600e-003 | 0.0000 | 81.6363 | 81.6363 | 4.5700e-003 | 0.0000 | 81.7507 |
| Worker | 0.0673 | 0.0423 | 0.4838 | 1.3900e-003 | 0.1528 | 1.0400e-003 | 0.1538 | 0.0406 | 9.6000e-004 | 0.0416 | 0.0000 | 126.0614 | 126.0614 | 3.0800e-003 | 0.0000 | 126.1385 |
| **Total** | **0.0790** | **0.4370** | **0.5851** | **2.4100e-003** | **0.1816** | **2.0800e-003** | **0.1837** | **0.0487** | **1.9600e-003** | **0.0507** | **0.0000** | **224.3167** | **224.3167** | **8.6000e-003** | **0.0000** | **224.5320** |

## 3.3 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 | 0.0651 | 0.6611 | 0.7310 | 1.1800e-003 | | 0.0330 | 0.0330 | | 0.0304 | 0.0304 | 0.0000 | 103.2147 | 103.2147 | 0.0334 | 0.0000 | 104.0492 |
| **Total** | **0.0651** | **0.6611** | **0.7310** | **1.1800e-003** | | **0.0330** | **0.0330** | | **0.0304** | **0.0304** | **0.0000** | **103.2147** | **103.2147** | **0.0334** | **0.0000** | **104.0492** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 9.0000e-004 | 0.0329 | 9.2400e-003 | 1.3000e-004 | 8.1400e-003 | 7.0000e-005 | 8.2200e-003 | 2.0800e-003 | 7.0000e-005 | 2.1600e-003 | 0.0000 | 12.8474 | 12.8474 | 7.1000e-004 | 0.0000 | 12.8651 |
| Vendor | 6.4200e-003 | 0.2283 | 0.0620 | 6.6000e-004 | 0.0163 | 3.3000e-004 | 0.0166 | 4.7000e-003 | 3.1000e-004 | 5.0100e-003 | 0.0000 | 63.4855 | 63.4855 | 3.2500e-003 | 0.0000 | 63.5668 |
| Worker | 0.0499 | 0.0302 | 0.3520 | 1.0600e-003 | 0.1210 | 8.0000e-004 | 0.1218 | 0.0322 | 7.4000e-004 | 0.0329 | 0.0000 | 96.1288 | 96.1288 | 2.1900e-003 | 0.0000 | 96.1835 |
| **Total** | **0.0572** | **0.2914** | **0.4233** | **1.8500e-003** | **0.1454** | **1.2000e-003** | **0.1466** | **0.0390** | **1.1200e-003** | **0.0401** | **0.0000** | **172.4618** | **172.4618** | **6.1500e-003** | **0.0000** | **172.6154** |

## 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 | 0.0651 | 0.6611 | 0.7310 | 1.1800e-003 | | 0.0330 | 0.0330 | | 0.0304 | 0.0304 | 0.0000 | 103.2146 | 103.2146 | 0.0334 | 0.0000 | 104.0491 |
| **Total** | **0.0651** | **0.6611** | **0.7310** | **1.1800e-003** | | **0.0330** | **0.0330** | | **0.0304** | **0.0304** | **0.0000** | **103.2146** | **103.2146** | **0.0334** | **0.0000** | **104.0491** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 9.0000e-004 | 0.0329 | 9.2400e-003 | 1.3000e-004 | 8.1400e-003 | 7.0000e-005 | 8.2200e-003 | 2.0800e-003 | 7.0000e-005 | 2.1600e-003 | 0.0000 | 12.8474 | 12.8474 | 7.1000e-004 | 0.0000 | 12.8651 |
| Vendor | 6.4200e-003 | 0.2283 | 0.0620 | 6.6000e-004 | 0.0163 | 3.3000e-004 | 0.0166 | 4.7000e-003 | 3.1000e-004 | 5.0100e-003 | 0.0000 | 63.4855 | 63.4855 | 3.2500e-003 | 0.0000 | 63.5668 |
| Worker | 0.0499 | 0.0302 | 0.3520 | 1.0600e-003 | 0.1210 | 8.0000e-004 | 0.1218 | 0.0322 | 7.4000e-004 | 0.0329 | 0.0000 | 96.1288 | 96.1288 | 2.1900e-003 | 0.0000 | 96.1835 |
| **Total** | **0.0572** | **0.2914** | **0.4233** | **1.8500e-003** | **0.1454** | **1.2000e-003** | **0.1466** | **0.0390** | **1.1200e-003** | **0.0401** | **0.0000** | **172.4618** | **172.4618** | **6.1500e-003** | **0.0000** | **172.6154** |

## 3.4 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 | 0.7629 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 3.2600e-003 | 0.0222 | 0.0308 | 5.0000e-005 | | 1.2000e-003 | 1.2000e-003 | | 1.2000e-003 | 1.2000e-003 | 0.0000 | 4.3405 | 4.3405 | 2.6000e-004 | 0.0000 | 4.3470 |
| **Total** | **0.7662** | **0.0222** | **0.0308** | **5.0000e-005** | | **1.2000e-003** | **1.2000e-003** | | **1.2000e-003** | **1.2000e-003** | **0.0000** | **4.3405** | **4.3405** | **2.6000e-004** | **0.0000** | **4.3470** |

## 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 | 8.2400e-003 | 4.9800e-003 | 0.0581 | 1.8000e-004 | 0.0200 | 1.3000e-004 | 0.0201 | 5.3100e-003 | 1.2000e-004 | 5.4400e-003 | 0.0000 | 15.8659 | 15.8659 | 3.6000e-004 | 0.0000 | 15.8750 |
| **Total** | **8.2400e-003** | **4.9800e-003** | **0.0581** | **1.8000e-004** | **0.0200** | **1.3000e-004** | **0.0201** | **5.3100e-003** | **1.2000e-004** | **5.4400e-003** | **0.0000** | **15.8659** | **15.8659** | **3.6000e-004** | **0.0000** | **15.8750** |

## 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 | 0.7629 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 3.2600e-003 | 0.0222 | 0.0308 | 5.0000e-005 | | 1.2000e-003 | 1.2000e-003 | | 1.2000e-003 | 1.2000e-003 | 0.0000 | 4.3405 | 4.3405 | 2.6000e-004 | 0.0000 | 4.3470 |
| **Total** | **0.7662** | **0.0222** | **0.0308** | **5.0000e-005** | | **1.2000e-003** | **1.2000e-003** | | **1.2000e-003** | **1.2000e-003** | **0.0000** | **4.3405** | **4.3405** | **2.6000e-004** | **0.0000** | **4.3470** |

## 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 | 8.2400e-003 | 4.9800e-003 | 0.0581 | 1.8000e-004 | 0.0200 | 1.3000e-004 | 0.0201 | 5.3100e-003 | 1.2000e-004 | 5.4400e-003 | 0.0000 | 15.8659 | 15.8659 | 3.6000e-004 | 0.0000 | 15.8750 |
| **Total** | **8.2400e-003** | **4.9800e-003** | **0.0581** | **1.8000e-004** | **0.0200** | **1.3000e-004** | **0.0201** | **5.3100e-003** | **1.2000e-004** | **5.4400e-003** | **0.0000** | **15.8659** | **15.8659** | **3.6000e-004** | **0.0000** | **15.8750** |

# DGS Unruh Building Renovation - Construction

**Sacramento County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Government Office Building | 164.60 | 1000sqft | 0.63 | 164,600.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 3.5 | **Precipitation Freq (Days)** | 58 |
| **Climate Zone** | 6 | | | **Operational Year** | 2024 |
| **Utility Company** | Sacramento Municipal Utility District | | | | |
| **CO2 Intensity (lb/MWhr)** | 590.31 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics -

Land Use - Lot acreage adjusted based on 6-story building

Construction Phase - Adjusted schedule based on 3-year construction duration

Off-road Equipment - No heavy-duty equipment

Off-road Equipment - No heavy-duty equipment

Off-road Equipment - No heavy-duty equipment

Trips and VMT - Adjusted demo haul trips based on truck hauling capacity. Added building construction material hauling trips.

Demolition - Building and fountain demo included

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstructionPhase | NumDays | 5.00 | 34.00 |

| | | | |
|---|---|---|---|
| tblConstructionPhase | NumDays | 100.00 | 682.00 |
| tblConstructionPhase | NumDays | 10.00 | 68.00 |
| tblLandUse | LotAcreage | 3.78 | 0.63 |
| tblTripsAndVMT | HaulingTripNumber | 878.00 | 1,171.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,167.00 |
| tblTripsAndVMT | WorkerTripNumber | 10.00 | 160.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 160.00 |
| tblTripsAndVMT | WorkerTripNumber | 11.00 | 160.00 |

# 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 1.6881 | 13.0170 | 13.9373 | 0.0384 | 4.8743 | 0.4931 | 5.3674 | 0.9551 | 0.4702 | 1.4253 | 0.0000 | 3,878.6805 | 3,878.6805 | 0.3361 | 0.0000 | 3,887.0843 |
| 2021 | 1.5590 | 11.9759 | 13.3667 | 0.0378 | 4.5451 | 0.4647 | 4.9760 | 0.8743 | 0.4279 | 1.2852 | 0.0000 | 3,818.7244 | 3,818.7244 | 0.4361 | 0.0000 | 3,826.9183 |
| 2022 | 1.3736 | 10.3000 | 12.2949 | 0.0312 | 1.4460 | 0.3878 | 1.8338 | 0.3867 | 0.3570 | 0.7438 | 0.0000 | 3,128.0064 | 3,128.0064 | 0.4318 | 0.0000 | 3,138.8007 |
| 2023 | 45.6288 | 9.1825 | 11.8080 | 0.0306 | 1.4616 | 0.3318 | 1.7934 | 0.3906 | 0.3054 | 0.6960 | 0.0000 | 3,067.8238 | 3,067.8238 | 0.4246 | 0.0000 | 3,078.4393 |
| **Maximum** | **45.6288** | **13.0170** | **13.9373** | **0.0384** | **4.8743** | **0.4931** | **5.3674** | **0.9551** | **0.4702** | **1.4253** | **0.0000** | **3,878.6805** | **3,878.6805** | **0.4361** | **0.0000** | **3,887.0843** |

### Mitigated Construction

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

| Year | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 1.6881 | 13.0170 | 13.9373 | 0.0384 | 4.8743 | 0.4931 | 5.3674 | 0.9551 | 0.4702 | 1.4253 | 0.0000 | 3,878.6805 | 3,878.6805 | 0.3361 | 0.0000 | 3,887.0843 |
| 2021 | 1.5590 | 11.9759 | 13.3667 | 0.0378 | 4.5451 | 0.4647 | 4.9760 | 0.8743 | 0.4279 | 1.2852 | 0.0000 | 3,818.7244 | 3,818.7244 | 0.4361 | 0.0000 | 3,826.9183 |
| 2022 | 1.3736 | 10.3000 | 12.2949 | 0.0312 | 1.4460 | 0.3878 | 1.8338 | 0.3867 | 0.3570 | 0.7438 | 0.0000 | 3,128.0064 | 3,128.0064 | 0.4318 | 0.0000 | 3,138.8007 |
| 2023 | 45.6288 | 9.1825 | 11.8080 | 0.0306 | 1.4616 | 0.3318 | 1.7934 | 0.3906 | 0.3054 | 0.6960 | 0.0000 | 3,067.8238 | 3,067.8238 | 0.4246 | 0.0000 | 3,078.4393 |
| **Maximum** | **45.6288** | **13.0170** | **13.9373** | **0.0384** | **4.8743** | **0.4931** | **5.3674** | **0.9551** | **0.4702** | **1.4253** | **0.0000** | **3,878.6805** | **3,878.6805** | **0.4361** | **0.0000** | **3,887.0843** |

| | ROG | NOx | 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 | 12/1/2020 | 3/4/2021 | 5 | 68 | |
| 2 | Building Construction | Building Construction | 3/5/2021 | 10/16/2023 | 5 | 682 | |
| 3 | Architectural Coating | Architectural Coating | 10/17/2023 | 12/1/2023 | 5 | 34 | |

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 246,900; Non-Residential Outdoor: 82,300; Striped Parking**

### 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 | Rubber Tired Dozers | 1 | 1.00 | 247 | 0.40 |
| Demolition | Tractors/Loaders/Backhoes | 2 | 6.00 | 97 | 0.37 |

| | | | | | |
|---|---|---|---|---|---|
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 4 | 160.00 | 0.00 | 1,171.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 160.00 | 27.00 | 1,167.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 160.00 | 0.00 | 0.00 | 10.00 | 6.50 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Demolition - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9121 | 0.0000 | 2.9121 | 0.4409 | 0.0000 | 0.4409 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8674 | 7.8729 | 7.6226 | 0.0120 | | 0.4672 | 0.4672 | | 0.4457 | 0.4457 | | 1,147.2352 | 1,147.2352 | 0.2169 | | 1,152.6578 |
| **Total** | **0.8674** | **7.8729** | **7.6226** | **0.0120** | **2.9121** | **0.4672** | **3.3793** | **0.4409** | **0.4457** | **0.8866** | | **1,147.2352** | **1,147.2352** | **0.2169** | | **1,152.6578** |

**Unmitigated Construction Off-Site**

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

| Category | lb/day | | | | | | | | | | lb/day | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.1308 | 4.7780 | 1.0907 | 0.0137 | 0.7450 | 0.0175 | 0.7625 | 0.1913 | 0.0167 | 0.2080 | | 1,461.8245 | 1,461.8245 | 0.0829 | | 1,463.8964 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6899 | 0.3661 | 5.2240 | 0.0128 | 1.2171 | 8.4600e-003 | 1.2256 | 0.3229 | 7.8000e-003 | 0.3307 | | 1,269.6207 | 1,269.6207 | 0.0364 | | 1,270.5301 |
| **Total** | **0.8207** | **5.1442** | **6.3148** | **0.0264** | **1.9622** | **0.0259** | **1.9881** | **0.5142** | **0.0245** | **0.5387** | | **2,731.4453** | **2,731.4453** | **0.1192** | | **2,734.4265** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9121 | 0.0000 | 2.9121 | 0.4409 | 0.0000 | 0.4409 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8674 | 7.8729 | 7.6226 | 0.0120 | | 0.4672 | 0.4672 | | 0.4457 | 0.4457 | 0.0000 | 1,147.2352 | 1,147.2352 | 0.2169 | | 1,152.6578 |
| **Total** | **0.8674** | **7.8729** | **7.6226** | **0.0120** | **2.9121** | **0.4672** | **3.3793** | **0.4409** | **0.4457** | **0.8866** | **0.0000** | **1,147.2352** | **1,147.2352** | **0.2169** | | **1,152.6578** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1308 | 4.7780 | 1.0907 | 0.0137 | 0.7450 | 0.0175 | 0.7625 | 0.1913 | 0.0167 | 0.2080 | | 1,461.8245 | 1,461.8245 | 0.0829 | | 1,463.8964 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6899 | 0.3661 | 5.2240 | 0.0128 | 1.2171 | 8.4600e-003 | 1.2256 | 0.3229 | 7.8000e-003 | 0.3307 | | 1,269.6207 | 1,269.6207 | 0.0364 | | 1,270.5301 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **0.8207** | **5.1442** | **6.3148** | **0.0264** | **1.9622** | **0.0259** | **1.9881** | **0.5142** | **0.0245** | **0.5387** | | **2,731.4453** | **2,731.4453** | **0.1192** | | **2,734.4265** |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9121 | 0.0000 | 2.9121 | 0.4409 | 0.0000 | 0.4409 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7965 | 7.2530 | 7.5691 | 0.0120 | | 0.4073 | 0.4073 | | 0.3886 | 0.3886 | | 1,147.4338 | 1,147.4338 | 0.2138 | | 1,152.7797 |
| **Total** | **0.7965** | **7.2530** | **7.5691** | **0.0120** | **2.9121** | **0.4073** | **3.3195** | **0.4409** | **0.3886** | **0.8295** | | **1,147.4338** | **1,147.4338** | **0.2138** | | **1,152.7797** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1212 | 4.3946 | 1.0111 | 0.0135 | 0.4159 | 0.0154 | 0.4312 | 0.1105 | 0.0147 | 0.1252 | | 1,444.9241 | 1,444.9241 | 0.0813 | | 1,446.9563 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6413 | 0.3283 | 4.7865 | 0.0123 | 1.2171 | 8.2100e-003 | 1.2253 | 0.3229 | 7.5700e-003 | 0.3304 | | 1,226.3665 | 1,226.3665 | 0.0326 | | 1,227.1823 |
| **Total** | **0.7624** | **4.7229** | **5.7975** | **0.0258** | **1.6330** | **0.0236** | **1.6566** | **0.4334** | **0.0223** | **0.4556** | | **2,671.2906** | **2,671.2906** | **0.1139** | | **2,674.1386** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9121 | 0.0000 | 2.9121 | 0.4409 | 0.0000 | 0.4409 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.7965 | 7.2530 | 7.5691 | 0.0120 | | 0.4073 | 0.4073 | | 0.3886 | 0.3886 | 0.0000 | 1,147.4338 | 1,147.4338 | 0.2138 | | 1,152.7797 |
| **Total** | **0.7965** | **7.2530** | **7.5691** | **0.0120** | **2.9121** | **0.4073** | **3.3195** | **0.4409** | **0.3886** | **0.8295** | **0.0000** | **1,147.4338** | **1,147.4338** | **0.2138** | | **1,152.7797** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1212 | 4.3946 | 1.0111 | 0.0135 | 0.4159 | 0.0154 | 0.4312 | 0.1105 | 0.0147 | 0.1252 | | 1,444.9241 | 1,444.9241 | 0.0813 | | 1,446.9563 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.6413 | 0.3283 | 4.7865 | 0.0123 | 1.2171 | 8.2100e-003 | 1.2253 | 0.3229 | 7.5700e-003 | 0.3304 | | 1,226.3665 | 1,226.3665 | 0.0326 | | 1,227.1823 |
| **Total** | **0.7624** | **4.7229** | **5.7975** | **0.0258** | **1.6330** | **0.0236** | **1.6566** | **0.4334** | **0.0223** | **0.4556** | | **2,671.2906** | **2,671.2906** | **0.1139** | | **2,674.1386** |

## 3.3 Building Construction - 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 | lb/day | | | | | | | | | | lb/day | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 0.7750 | 7.9850 | 7.2637 | 0.0114 | | 0.4475 | 0.4475 | | 0.4117 | 0.4117 | | 1,103.2158 | 1,103.2158 | 0.3568 | | 1,112.1358 |
| **Total** | **0.7750** | **7.9850** | **7.2637** | **0.0114** | | **0.4475** | **0.4475** | | **0.4117** | **0.4117** | | **1,103.2158** | **1,103.2158** | **0.3568** | | **1,112.1358** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0120 | 0.4367 | 0.1005 | 1.3400e-003 | 0.0786 | 1.5300e-003 | 0.0801 | 0.0201 | 1.4600e-003 | 0.0216 | | 143.5766 | 143.5766 | 8.0800e-003 | | 143.7785 |
| Vendor | 0.0834 | 2.7119 | 0.6925 | 6.6600e-003 | 0.1625 | 7.4400e-003 | 0.1699 | 0.0468 | 7.1100e-003 | 0.0539 | | 705.9904 | 705.9904 | 0.0386 | | 706.9550 |
| Worker | 0.6413 | 0.3283 | 4.7865 | 0.0123 | 1.2171 | 8.2100e-003 | 1.2253 | 0.3229 | 7.5700e-003 | 0.3304 | | 1,226.3665 | 1,226.3665 | 0.0326 | | 1,227.1823 |
| **Total** | **0.7368** | **3.4768** | **5.5794** | **0.0203** | **1.4582** | **0.0172** | **1.4753** | **0.3897** | **0.0161** | **0.4059** | | **2,075.9334** | **2,075.9334** | **0.0793** | | **2,077.9157** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.7750 | 7.9850 | 7.2637 | 0.0114 | | 0.4475 | 0.4475 | | 0.4117 | 0.4117 | 0.0000 | 1,103.2158 | 1,103.2158 | 0.3568 | | 1,112.1358 |
| **Total** | **0.7750** | **7.9850** | **7.2637** | **0.0114** | | **0.4475** | **0.4475** | | **0.4117** | **0.4117** | **0.0000** | **1,103.2158** | **1,103.2158** | **0.3568** | | **1,112.1358** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0120 | 0.4367 | 0.1005 | 1.3400e-003 | 0.0786 | 1.5300e-003 | 0.0801 | 0.0201 | 1.4600e-003 | 0.0216 | | 143.5766 | 143.5766 | 8.0800e-003 | | 143.7785 |
| Vendor | 0.0834 | 2.7119 | 0.6925 | 6.6600e-003 | 0.1625 | 7.4400e-003 | 0.1699 | 0.0468 | 7.1100e-003 | 0.0539 | | 705.9904 | 705.9904 | 0.0386 | | 706.9550 |
| Worker | 0.6413 | 0.3283 | 4.7865 | 0.0123 | 1.2171 | 8.2100e-003 | 1.2253 | 0.3229 | 7.5700e-003 | 0.3304 | | 1,226.3665 | 1,226.3665 | 0.0326 | | 1,227.1823 |
| **Total** | **0.7368** | **3.4768** | **5.5794** | **0.0203** | **1.4582** | **0.0172** | **1.4753** | **0.3897** | **0.0161** | **0.4059** | | **2,075.9334** | **2,075.9334** | **0.0793** | | **2,077.9157** |

## 3.3 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| **Total** | **0.6863** | **7.0258** | **7.1527** | **0.0114** | | **0.3719** | **0.3719** | | **0.3422** | **0.3422** | | **1,103.9393** | **1,103.9393** | **0.3570** | | **1,112.8652** |

## Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0113 | 0.4007 | 0.0963 | 1.3200e-003 | 0.0665 | 1.3100e-003 | 0.0678 | 0.0172 | 1.2500e-003 | 0.0184 | | 141.8491 | 141.8491 | 7.9300e-003 | | 142.0475 |
| Vendor | 0.0774 | 2.5782 | 0.6380 | 6.6000e-003 | 0.1625 | 6.5200e-003 | 0.1690 | 0.0467 | 6.2300e-003 | 0.0530 | | 699.8319 | 699.8319 | 0.0375 | | 700.7687 |
| Worker | 0.5986 | 0.2952 | 4.4080 | 0.0119 | 1.2171 | 8.0000e-003 | 1.2251 | 0.3229 | 7.3700e-003 | 0.3302 | | 1,182.3860 | 1,182.3860 | 0.0293 | | 1,183.1193 |
| **Total** | **0.6873** | **3.2742** | **5.1423** | **0.0198** | **1.4460** | **0.0158** | **1.4619** | **0.3867** | **0.0149** | **0.4016** | | **2,024.0670** | **2,024.0670** | **0.0747** | | **2,025.9355** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6863 | 7.0258 | 7.1527 | 0.0114 | | 0.3719 | 0.3719 | | 0.3422 | 0.3422 | 0.0000 | 1,103.9393 | 1,103.9393 | 0.3570 | | 1,112.8652 |
| **Total** | **0.6863** | **7.0258** | **7.1527** | **0.0114** | | **0.3719** | **0.3719** | | **0.3422** | **0.3422** | **0.0000** | **1,103.9393** | **1,103.9393** | **0.3570** | | **1,112.8652** |

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0113 | 0.4007 | 0.0963 | 1.3200e-003 | 0.0665 | 1.3100e-003 | 0.0678 | 0.0172 | 1.2500e-003 | 0.0184 | | 141.8491 | 141.8491 | 7.9300e-003 | | 142.0475 |
| Vendor | 0.0774 | 2.5782 | 0.6380 | 6.6000e-003 | 0.1625 | 6.5200e-003 | 0.1690 | 0.0467 | 6.2300e-003 | 0.0530 | | 699.8319 | 699.8319 | 0.0375 | | 700.7687 |
| Worker | 0.5986 | 0.2952 | 4.4080 | 0.0119 | 1.2171 | 8.0000e-003 | 1.2251 | 0.3229 | 7.3700e-003 | 0.3302 | | 1,182.3860 | 1,182.3860 | 0.0293 | | 1,183.1193 |
| **Total** | **0.6873** | **3.2742** | **5.1423** | **0.0198** | **1.4460** | **0.0158** | **1.4619** | **0.3867** | **0.0149** | **0.4016** | | **2,024.0670** | **2,024.0670** | **0.0747** | | **2,025.9355** |

## 3.3 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6322 | 6.4186 | 7.0970 | 0.0114 | | 0.3203 | 0.3203 | | 0.2946 | 0.2946 | | 1,104.6089 | 1,104.6089 | 0.3573 | | 1,113.5402 |
| **Total** | **0.6322** | **6.4186** | **7.0970** | **0.0114** | | **0.3203** | **0.3203** | | **0.2946** | **0.2946** | | **1,104.6089** | **1,104.6089** | **0.3573** | | **1,113.5402** |

**Unmitigated Construction Off-Site**

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 8.6200e-003 | 0.3111 | 0.0876 | 1.2900e-003 | 0.0820 | 7.0000e-004 | 0.0827 | 0.0210 | 6.7000e-004 | 0.0216 | | 138.4050 | 138.4050 | 7.4200e-003 | | 138.5904 |
| Vendor | 0.0612 | 2.1870 | 0.5660 | 6.4700e-003 | 0.1624 | 3.0700e-003 | 0.1655 | 0.0467 | 2.9400e-003 | 0.0497 | | 686.8768 | 686.8768 | 0.0337 | | 687.7182 |
| Worker | 0.5595 | 0.2658 | 4.0573 | 0.0114 | 1.2171 | 7.8100e-003 | 1.2249 | 0.3229 | 7.1900e-003 | 0.3300 | | 1,137.9332 | 1,137.9332 | 0.0263 | | 1,138.5905 |
| **Total** | **0.6293** | **2.7638** | **4.7110** | **0.0192** | **1.4616** | **0.0116** | **1.4732** | **0.3906** | **0.0108** | **0.4014** | | **1,963.2150** | **1,963.2150** | **0.0674** | | **1,964.8992** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6322 | 6.4186 | 7.0970 | 0.0114 | | 0.3203 | 0.3203 | | 0.2946 | 0.2946 | 0.0000 | 1,104.6089 | 1,104.6089 | 0.3573 | | 1,113.5402 |
| **Total** | **0.6322** | **6.4186** | **7.0970** | **0.0114** | | **0.3203** | **0.3203** | | **0.2946** | **0.2946** | **0.0000** | **1,104.6089** | **1,104.6089** | **0.3573** | | **1,113.5402** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 8.6200e-003 | 0.3111 | 0.0876 | 1.2900e-003 | 0.0820 | 7.0000e-004 | 0.0827 | 0.0210 | 6.7000e-004 | 0.0216 | | 138.4050 | 138.4050 | 7.4200e-003 | | 138.5904 |
| Vendor | 0.0612 | 2.1870 | 0.5660 | 6.4700e-003 | 0.1624 | 3.0700e-003 | 0.1655 | 0.0467 | 2.9400e-003 | 0.0497 | | 686.8768 | 686.8768 | 0.0337 | | 687.7182 |
| Worker | 0.5595 | 0.2658 | 4.0573 | 0.0114 | 1.2171 | 7.8100e-003 | 1.2249 | 0.3229 | 7.1900e-003 | 0.3300 | | 1,137.9332 | 1,137.9332 | 0.0263 | | 1,138.5905 |
| **Total** | **0.6293** | **2.7638** | **4.7110** | **0.0192** | **1.4616** | **0.0116** | **1.4732** | **0.3906** | **0.0108** | **0.4014** | | **1,963.2150** | **1,963.2150** | **0.0674** | | **1,964.8992** |

## 3.4 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 44.8777 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **45.0694** | **1.3030** | **1.8111** | **2.9700e-003** | | **0.0708** | **0.0708** | | **0.0708** | **0.0708** | | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5595 | 0.2658 | 4.0573 | 0.0114 | 1.2171 | 7.8100e-003 | 1.2249 | 0.3229 | 7.1900e-003 | 0.3300 | | 1,137.9332 | 1,137.9332 | 0.0263 | | 1,138.5905 |
| **Total** | **0.5595** | **0.2658** | **4.0573** | **0.0114** | **1.2171** | **7.8100e-003** | **1.2249** | **0.3229** | **7.1900e-003** | **0.3300** | | **1,137.9332** | **1,137.9332** | **0.0263** | | **1,138.5905** |

## Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 44.8777 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.1917 | 1.3030 | 1.8111 | 2.9700e-003 | | 0.0708 | 0.0708 | | 0.0708 | 0.0708 | 0.0000 | 281.4481 | 281.4481 | 0.0168 | | 281.8690 |
| **Total** | **45.0694** | **1.3030** | **1.8111** | **2.9700e-003** | | **0.0708** | **0.0708** | | **0.0708** | **0.0708** | **0.0000** | **281.4481** | **281.4481** | **0.0168** | | **281.8690** |

## Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.5595 | 0.2658 | 4.0573 | 0.0114 | 1.2171 | 7.8100e-003 | 1.2249 | 0.3229 | 7.1900e-003 | 0.3300 | | 1,137.9332 | 1,137.9332 | 0.0263 | | 1,138.5905 |
| **Total** | **0.5595** | **0.2658** | **4.0573** | **0.0114** | **1.2171** | **7.8100e-003** | **1.2249** | **0.3229** | **7.1900e-003** | **0.3300** | | **1,137.9332** | **1,137.9332** | **0.0263** | | **1,138.5905** |

DGS Unruh Building Renovation - Operation - Sacramento County, Annual

# DGS Unruh Building Renovation - Operation

**Sacramento County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Government Office Building | 164.60 | 1000sqft | 0.63 | 164,600.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 3.5 | **Precipitation Freq (Days)** | 58 |
| **Climate Zone** | 6 | | | **Operational Year** | 2024 |
| **Utility Company** | Sacramento Municipal Utility District | | | | |
| **CO2 Intensity (lb/MWhr)** | 590.31 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics -

Land Use - Adjusted acreage due to 6 story building

Construction Phase - Operation model run only

Off-road Equipment - Operation model run only

Trips and VMT - Operation model run only

Architectural Coating - Operation model run only

Vehicle Trips - Trip rate based on CCSP regional average VMT

Water And Wastewater - Adjusted water use based on 47 additional employees.

Solid Waste - Adjusted solid waste generation based on 47 additional employees

Energy Mitigation - Exceeds 2019 Title 24 by 15%. 100% energy needs met by renewables

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Existing Unruh generator (100kW) will be replaced with a 750kW generator. 500 hrs

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | ConstArea_Nonresidential_Exterior | 82,300.00 | 0.00 |
| tblArchitecturalCoating | ConstArea_Nonresidential_Interior | 246,900.00 | 0.00 |
| tblLandUse | LotAcreage | 3.78 | 0.63 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 153.08 | 27.73 |
| tblStationaryGeneratorsPumpsEF | CH4_EF | 0.07 | 0.07 |
| tblStationaryGeneratorsPumpsEF | ROG_EF | 2.2480e-003 | 2.2477e-003 |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue | 0.00 | 871.00 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 500.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 27.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 5.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 10.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 11.00 | 0.00 |
| tblVehicleTrips | CC_TL | 5.00 | 0.50 |
| tblVehicleTrips | CNW_TL | 6.50 | 0.75 |
| tblVehicleTrips | CW_TL | 10.00 | 1.00 |
| tblVehicleTrips | WD_TR | 68.93 | 14.77 |
| tblWater | IndoorWaterUseRate | 32,699,384.29 | 319,375.00 |
| tblWater | OutdoorWaterUseRate | 20,041,558.12 | 0.00 |

## 2.0 Emissions Summary

## 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 | 0.7193 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |
| Energy | 0.0116 | 0.1057 | 0.0888 | 6.3000e-004 | | 8.0300e-003 | 8.0300e-003 | | 8.0300e-003 | 8.0300e-003 | 0.0000 | 751.4849 | 751.4849 | 0.0335 | 8.5800e-003 | 754.8780 |
| Mobile | 0.2924 | 0.9527 | 1.4069 | 2.0900e-003 | 0.0971 | 2.6300e-003 | 0.0998 | 0.0260 | 2.4400e-003 | 0.0285 | 0.0000 | 193.1892 | 193.1892 | 0.0185 | 0.0000 | 193.6511 |
| Stationary | 0.3573 | 1.5980 | 0.9112 | 1.7200e-003 | | 0.0526 | 0.0526 | | 0.0526 | 0.0526 | 0.0000 | 165.8372 | 165.8372 | 0.0233 | 0.0000 | 166.4184 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 5.6289 | 0.0000 | 5.6289 | 0.3327 | 0.0000 | 13.9455 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.1130 | 0.4261 | 0.5391 | 4.1000e-004 | 2.5000e-004 | 0.6239 |
| **Total** | **1.3806** | **2.6565** | **2.4090** | **4.4400e-003** | **0.0971** | **0.0632** | **0.1604** | **0.0260** | **0.0631** | **0.0891** | **5.7419** | **1,110.9414** | **1,116.6834** | **0.4083** | **8.8300e-003** | **1,129.5212** |

**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 | 0.7193 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |
| Energy | 6.6700e-003 | 0.0606 | 0.0509 | 3.6000e-004 | | 4.6100e-003 | 4.6100e-003 | | 4.6100e-003 | 4.6100e-003 | 0.0000 | 65.9742 | 65.9742 | 1.2600e-003 | 1.2100e-003 | 66.3663 |
| Mobile | 0.2924 | 0.9527 | 1.4069 | 2.0900e-003 | 0.0971 | 2.6300e-003 | 0.0998 | 0.0260 | 2.4400e-003 | 0.0285 | 0.0000 | 193.1892 | 193.1892 | 0.0185 | 0.0000 | 193.6511 |
| Stationary | 0.3573 | 1.5980 | 0.9112 | 1.7200e-003 | | 0.0526 | 0.0526 | | 0.0526 | 0.0526 | 0.0000 | 165.8372 | 165.8372 | 0.0233 | 0.0000 | 166.4184 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.8145 | 0.0000 | 2.8145 | 0.1663 | 0.0000 | 6.9727 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0904 | 0.3409 | 0.4313 | 3.3000e-004 | 2.0000e-004 | 0.4991 |
| **Total** | **1.3757** | **2.6114** | **2.3711** | **4.1700e-003** | **0.0971** | **0.0598** | **0.1570** | **0.0260** | **0.0596** | **0.0857** | **2.9049** | **425.3455** | **428.2504** | **0.2097** | **1.4100e-003** | **433.9120** |

| | ROG | NOx | 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** | **0.36** | **1.70** | **1.57** | **6.08** | **0.00** | **5.41** | **2.13** | **0.00** | **5.42** | **3.84** | **49.41** | **61.71** | **61.65** | **48.65** | **84.03** | **61.58** |

# 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.2924 | 0.9527 | 1.4069 | 2.0900e-003 | 0.0971 | 2.6300e-003 | 0.0998 | 0.0260 | 2.4400e-003 | 0.0285 | 0.0000 | 193.1892 | 193.1892 | 0.0185 | 0.0000 | 193.6511 |
| Unmitigated | 0.2924 | 0.9527 | 1.4069 | 2.0900e-003 | 0.0971 | 2.6300e-003 | 0.0998 | 0.0260 | 2.4400e-003 | 0.0285 | 0.0000 | 193.1892 | 193.1892 | 0.0185 | 0.0000 | 193.6511 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Government Office Building | 2,431.14 | 0.00 | 0.00 | 260,637 | 260,637 |
| Total | 2,431.14 | 0.00 | 0.00 | 260,637 | 260,637 |

### 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- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Government Office Building | 1.00 | 0.50 | 0.75 | 33.00 | 62.00 | 5.00 | 50 | 34 | 16 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government Office Building | 0.566033 | 0.037143 | 0.208217 | 0.113428 | 0.016713 | 0.004955 | 0.018463 | 0.024036 | 0.001978 | 0.001883 | 0.005758 | 0.000618 | 0.000776 |

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable 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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 636.4187 | 636.4187 | 0.0313 | 6.4700e-003 | 639.1280 |
| NaturalGas Mitigated | 6.6700e-003 | 0.0606 | 0.0509 | 3.6000e-004 | | 4.6100e-003 | 4.6100e-003 | | 4.6100e-003 | 4.6100e-003 | 0.0000 | 65.9742 | 65.9742 | 1.2600e-003 | 1.2100e-003 | 66.3663 |
| NaturalGas Unmitigated | 0.0116 | 0.1057 | 0.0888 | 6.3000e-004 | | 8.0300e-003 | 8.0300e-003 | | 8.0300e-003 | 8.0300e-003 | 0.0000 | 115.0663 | 115.0663 | 2.2100e-003 | 2.1100e-003 | 115.7500 |

## 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 | | | | | |
| Government Office Building | 2.15626e+006 | 0.0116 | 0.1057 | 0.0888 | 6.3000e-004 | | 8.0300e-003 | 8.0300e-003 | | 8.0300e-003 | 8.0300e-003 | 0.0000 | 115.0663 | 115.0663 | 2.2100e-003 | 2.1100e-003 | 115.7500 |
| **Total** | | **0.0116** | **0.1057** | **0.0888** | **6.3000e-004** | | **8.0300e-003** | **8.0300e-003** | | **8.0300e-003** | **8.0300e-003** | **0.0000** | **115.0663** | **115.0663** | **2.2100e-003** | **2.1100e-003** | **115.7500** |

**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 | | | | | |
| Government Office Building | 1.23631e+006 | 6.6700e-003 | 0.0606 | 0.0509 | 3.6000e-004 | | 4.6100e-003 | 4.6100e-003 | | 4.6100e-003 | 4.6100e-003 | 0.0000 | 65.9742 | 65.9742 | 1.2600e-003 | 1.2100e-003 | 66.3663 |
| **Total** | | **6.6700e-003** | **0.0606** | **0.0509** | **3.6000e-004** | | **4.6100e-003** | **4.6100e-003** | | **4.6100e-003** | **4.6100e-003** | **0.0000** | **65.9742** | **65.9742** | **1.2600e-003** | **1.2100e-003** | **66.3663** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Government Office Building | 2.37682e+006 | 636.4187 | 0.0313 | 6.4700e-003 | 639.1280 |
| **Total** | | **636.4187** | **0.0313** | **6.4700e-003** | **639.1280** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Government Office Building | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 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 | 0.7193 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |
| Unmitigated | 0.7193 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0763 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.6429 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.9000e-004 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |
| **Total** | **0.7193** | **2.0000e-005** | **2.1000e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **4.0800e-003** | **4.0800e-003** | **1.0000e-005** | **0.0000** | **4.3500e-003** |

**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 | 0.0763 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.6429 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.9000e-004 | 2.0000e-005 | 2.1000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.0800e-003 | 4.0800e-003 | 1.0000e-005 | 0.0000 | 4.3500e-003 |
| **Total** | **0.7193** | **2.0000e-005** | **2.1000e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **4.0800e-003** | **4.0800e-003** | **1.0000e-005** | **0.0000** | **4.3500e-003** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 0.4313 | 3.3000e-004 | 2.0000e-004 | 0.4991 |
| Unmitigated | 0.5391 | 4.1000e-004 | 2.5000e-004 | 0.6239 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Government Office Building | 0.319375 / 0 | 0.5391 | 4.1000e-004 | 2.5000e-004 | 0.6239 |
| **Total** | | **0.5391** | **4.1000e-004** | **2.5000e-004** | **0.6239** |

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Government Office Building | 0.2555 / 0 | 0.4313 | 3.3000e-004 | 2.0000e-004 | 0.4991 |
| **Total** | | **0.4313** | **3.3000e-004** | **2.0000e-004** | **0.4991** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 2.8145 | 0.1663 | 0.0000 | 6.9727 |
| Unmitigated | 5.6289 | 0.3327 | 0.0000 | 13.9455 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Government Office Building | 27.73 | 5.6289 | 0.3327 | 0.0000 | 13.9455 |
| **Total** | | **5.6289** | **0.3327** | **0.0000** | **13.9455** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Government Office Building | 13.865 | 2.8145 | 0.1663 | 0.0000 | 6.9727 |
| **Total** | | **2.8145** | **0.1663** | **0.0000** | **6.9727** |

## 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 | 0 | 500 | 871 | 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 | 0.3573 | 1.5980 | 0.9112 | 1.7200e-003 | | 0.0526 | 0.0526 | | 0.0526 | 0.0526 | 0.0000 | 165.8372 | 165.8372 | 0.0233 | 0.0000 | 166.4184 |
| **Total** | **0.3573** | **1.5980** | **0.9112** | **1.7200e-003** | | **0.0526** | **0.0526** | | **0.0526** | **0.0526** | **0.0000** | **165.8372** | **165.8372** | **0.0233** | **0.0000** | **166.4184** |

## 11.0 Vegetation

DGS Unruh Building Renovation - Operation - Sacramento County, Summer

# DGS Unruh Building Renovation - Operation

**Sacramento County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Government Office Building | 164.60 | 1000sqft | 0.63 | 164,600.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 3.5 | **Precipitation Freq (Days)** | 58 |
| **Climate Zone** | 6 | | | **Operational Year** | 2024 |
| **Utility Company** | Sacramento Municipal Utility District | | | | |
| **CO2 Intensity (lb/MWhr)** | 590.31 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics -

Land Use - Adjusted acreage due to 6 story building

Construction Phase - Operation model run only

Off-road Equipment - Operation model run only

Trips and VMT - Operation model run only

Architectural Coating - Operation model run only

Vehicle Trips - Trip rate based on CCSP regional average VMT

Water And Wastewater - Adjusted water use based on 47 additional employees.

Solid Waste - Adjusted solid waste generation based on 47 additional employees

Energy Mitigation - Exceeds 2019 Title 24 by 15%. 100% energy needs met by renewables

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Existing Unruh generator (100kW) will be replaced with a 750kW generator. 500 hrs per

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | ConstArea_Nonresidential_Exterior | 82,300.00 | 0.00 |
| tblArchitecturalCoating | ConstArea_Nonresidential_Interior | 246,900.00 | 0.00 |
| tblLandUse | LotAcreage | 3.78 | 0.63 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblSolidWaste | SolidWasteGenerationRate | 153.08 | 27.73 |
| tblStationaryGeneratorsPumpsEF | CH4_EF | 0.07 | 0.07 |
| tblStationaryGeneratorsPumpsEF | ROG_EF | 2.2480e-003 | 2.2477e-003 |
| tblStationaryGeneratorsPumpsUse | HorsePowerValue | 0.00 | 871.00 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 500.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 27.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 5.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 10.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 53.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | WorkerTripNumber | 11.00 | 0.00 |
| tblVehicleTrips | CC_TL | 5.00 | 0.50 |
| tblVehicleTrips | CNW_TL | 6.50 | 0.75 |
| tblVehicleTrips | CW_TL | 10.00 | 1.00 |
| tblVehicleTrips | WD_TR | 68.93 | 14.77 |
| tblWater | IndoorWaterUseRate | 32,699,384.29 | 319,375.00 |
| tblWater | OutdoorWaterUseRate | 20,041,558.12 | 0.00 |

## 2.0 Emissions Summary

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 3.9420 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |
| Energy | 0.0637 | 0.5792 | 0.4865 | 3.4800e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | | 695.0073 | 695.0073 | 0.0133 | 0.0127 | 699.1373 |
| Mobile | 3.1042 | 7.3314 | 9.7128 | 0.0170 | 0.7735 | 0.0198 | 0.7934 | 0.2067 | 0.0184 | 0.2251 | | 1,734.7277 | 1,734.7277 | 0.1463 | | 1,738.3841 |
| Stationary | 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** | **7.1099** | **7.9107** | **10.2161** | **0.0205** | **0.7735** | **0.0639** | **0.8374** | **0.2067** | **0.0625** | **0.2692** | | **2,429.7710** | **2,429.7710** | **0.1597** | **0.0127** | **2,437.5598** |

### Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 3.9420 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |
| Energy | 0.0365 | 0.3321 | 0.2789 | 1.9900e-003 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | | 398.4885 | 398.4885 | 7.6400e-003 | 7.3100e-003 | 400.8565 |
| Mobile | 3.1042 | 7.3314 | 9.7128 | 0.0170 | 0.7735 | 0.0198 | 0.7934 | 0.2067 | 0.0184 | 0.2251 | | 1,734.7277 | 1,734.7277 | 0.1463 | | 1,738.3841 |
| Stationary | 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** | **7.0827** | **7.6636** | **10.0085** | **0.0190** | **0.7735** | **0.0451** | **0.8187** | **0.2067** | **0.0437** | **0.2504** | | **2,133.2522** | **2,133.2522** | **0.1540** | **7.3100e-003** | **2,139.2790** |

| | ROG | NOx | 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** | **0.38** | **3.12** | **2.03** | **7.27** | **0.00** | **29.39** | **2.24** | **0.00** | **30.06** | **6.98** | **0.00** | **12.20** | **12.20** | **3.56** | **42.62** | **12.24** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 3.1042 | 7.3314 | 9.7128 | 0.0170 | 0.7735 | 0.0198 | 0.7934 | 0.2067 | 0.0184 | 0.2251 | | 1,734.7277 | 1,734.7277 | 0.1463 | | 1,738.3841 |
| Unmitigated | 3.1042 | 7.3314 | 9.7128 | 0.0170 | 0.7735 | 0.0198 | 0.7934 | 0.2067 | 0.0184 | 0.2251 | | 1,734.7277 | 1,734.7277 | 0.1463 | | 1,738.3841 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Government Office Building | 2,431.14 | 0.00 | 0.00 | 260,637 | 260,637 |
| Total | 2,431.14 | 0.00 | 0.00 | 260,637 | 260,637 |

### 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- | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Government Office Building | 1.00 | 0.50 | 0.75 | 33.00 | 62.00 | 5.00 | 50 | 34 | 16 |

### 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government Office Building | 0.566033 | 0.037143 | 0.208217 | 0.113428 | 0.016713 | 0.004955 | 0.018463 | 0.024036 | 0.001978 | 0.001883 | 0.005758 | 0.000618 | 0.000776 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0365 | 0.3321 | 0.2789 | 1.9900e-003 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | | 398.4885 | 398.4885 | 7.6400e-003 | 7.3100e-003 | 400.8565 |
| NaturalGas Unmitigated | 0.0637 | 0.5792 | 0.4865 | 3.4800e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | | 695.0073 | 695.0073 | 0.0133 | 0.0127 | 699.1373 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Government Office Building | 5907.56 | 0.0637 | 0.5792 | 0.4865 | 3.4800e-003 | | 0.0440 | 0.0440 | | 0.0440 | 0.0440 | | 695.0073 | 695.0073 | 0.0133 | 0.0127 | 699.1373 |
| **Total** | | **0.0637** | **0.5792** | **0.4865** | **3.4800e-003** | | **0.0440** | **0.0440** | | **0.0440** | **0.0440** | | **695.0073** | **695.0073** | **0.0133** | **0.0127** | **699.1373** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| Government Office Building | 3.38715 | 0.0365 | 0.3321 | 0.2789 | 1.9900e-003 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | | 398.4885 | 398.4885 | 7.6400e-003 | 7.3100e-003 | 400.8565 |
| **Total** | | **0.0365** | **0.3321** | **0.2789** | **1.9900e-003** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | | **398.4885** | **398.4885** | **7.6400e-003** | **7.3100e-003** | **400.8565** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 3.9420 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |
| Unmitigated | 3.9420 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.4180 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 3.5224 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5500e-003 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |
| **Total** | **3.9420** | **1.5000e-004** | **0.0168** | **0.0000** | | **6.0000e-005** | **6.0000e-005** | | **6.0000e-005** | **6.0000e-005** | | **0.0360** | **0.0360** | **9.0000e-005** | | **0.0384** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.4180 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 3.5224 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5500e-003 | 1.5000e-004 | 0.0168 | 0.0000 | | 6.0000e-005 | 6.0000e-005 | | 6.0000e-005 | 6.0000e-005 | | 0.0360 | 0.0360 | 9.0000e-005 | | 0.0384 |
| **Total** | **3.9420** | **1.5000e-004** | **0.0168** | **0.0000** | | **6.0000e-005** | **6.0000e-005** | | **6.0000e-005** | **6.0000e-005** | | **0.0360** | **0.0360** | **9.0000e-005** | | **0.0384** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

| 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 | 0 | 500 | 871 | 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Emergency Generator - Diesel (750 - 9999 HP) | 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** |

## 11.0 Vegetation

**Regional Construction Emissions Worksheet* - Unmitigated**

*CalEEMod, Version 2016.3.2

**Demolition**

| | | | lbs/day | | | | lbs/day | | | tons/year | | | lbs/day | | | tons/year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
| Onsite | | **2020** | | | | | | | | | | | | | | | | |
| | Fugitive Dust | | | | | | 2.91 | 0.00 | 2.91 | 0.53 | 0.00 | 0.53 | 0.44 | 0.00 | 0.44 | 0.08 | 0.00 | 0.08 |
| | Off-Road | | 0.87 | 7.87 | 7.62 | 0.01 | | 0.47 | 0.47 | 0.00 | 0.09 | 0.09 | | 0.45 | 0.45 | 0.00 | 0.08 | 0.08 |
| | Total | | **0.87** | **7.87** | **7.62** | **0.01** | **2.91** | **0.47** | **3.38** | **0.53** | **0.09** | **0.62** | **0.44** | **0.45** | **0.89** | **0.08** | **0.08** | **0.16** |
| Offsite | | | | | | | | | | | | | | | | | | |
| | Hauling | | 0.13 | 4.78 | 1.09 | 0.01 | 0.75 | 0.02 | 0.76 | 0.14 | 0.00 | 0.14 | 0.19 | 0.02 | 0.21 | 0.03 | 0.00 | 0.04 |
| | Vendor | | 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 |
| | Worker | | 0.69 | 0.37 | 5.22 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| | Total | | **0.82** | **5.14** | **6.31** | **0.03** | **1.96** | **0.03** | **1.99** | **0.36** | **0.00** | **0.36** | **0.51** | **0.02** | **0.54** | **0.09** | **0.00** | **0.10** |
| ***TOTAL*** | | | ***1.69*** | ***13.02*** | ***13.94*** | ***0.04*** | ***4.87*** | ***0.49*** | ***5.37*** | ***0.89*** | ***0.09*** | ***0.98*** | ***0.96*** | ***0.47*** | ***1.43*** | ***0.17*** | ***0.09*** | ***0.26*** |
| Onsite | | **2021** | | | | | | | | | | | | | | | | |
| | Fugitive Dust | | | | | | 2.91 | 0.00 | 2.91 | 0.53 | 0.00 | 0.53 | 0.44 | 0.00 | 0.44 | 0.08 | 0.00 | 0.08 |
| | Off-Road | | 0.80 | 7.25 | 7.57 | 0.01 | | 0.41 | 0.41 | 0.00 | 0.07 | 0.07 | | 0.39 | 0.39 | 0.00 | 0.07 | 0.07 |
| | Total | | **0.80** | **7.25** | **7.57** | **0.01** | **2.91** | **0.41** | **3.32** | **0.53** | **0.07** | **0.61** | **0.44** | **0.39** | **0.83** | **0.08** | **0.07** | **0.15** |
| Offsite | | | | | | | | | | | | | | | | | | |
| | Hauling | | 0.12 | 4.39 | 1.01 | 0.01 | 0.42 | 0.02 | 0.43 | 0.08 | 0.00 | 0.08 | 0.11 | 0.01 | 0.13 | 0.02 | 0.00 | 0.02 |
| | Vendor | | 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 |
| | Worker | | 0.64 | 0.33 | 4.79 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| | Total | | **0.76** | **4.72** | **5.80** | **0.03** | **1.63** | **0.02** | **1.66** | **0.30** | **0.00** | **0.30** | **0.43** | **0.02** | **0.46** | **0.08** | **0.00** | **0.08** |
| ***TOTAL*** | | | ***1.56*** | ***11.98*** | ***13.37*** | ***0.04*** | ***4.55*** | ***0.43*** | ***4.98*** | ***0.83*** | ***0.08*** | ***0.91*** | ***0.87*** | ***0.41*** | ***1.29*** | ***0.16*** | ***0.07*** | ***0.23*** |
| Onsite | | **2020-2021** | | | | | | | | | | | | | | | | |
| | Fugitive Dust | | 0.00 | 0.00 | 0.00 | 0.00 | 2.91 | 0.00 | 2.91 | 0.53 | 0.00 | 0.53 | 0.44 | 0.00 | 0.44 | 0.08 | 0.00 | 0.08 |
| | Off-Road | | 0.87 | 7.87 | 7.62 | 0.01 | 0.00 | 0.47 | 0.47 | 0.00 | 0.09 | 0.09 | 0.00 | 0.45 | 0.45 | 0.00 | 0.08 | 0.08 |
| | Total | | **0.87** | **7.87** | **7.62** | **0.01** | **2.91** | **0.47** | **3.38** | **0.53** | **0.09** | **0.62** | **0.44** | **0.45** | **0.89** | **0.08** | **0.08** | **0.16** |
| Offsite | | | | | | | | | | | | | | | | | | |
| | Hauling | | 0.13 | 4.78 | 1.09 | 0.01 | 0.75 | 0.02 | 0.76 | 0.14 | 0.00 | 0.14 | 0.19 | 0.02 | 0.21 | 0.03 | 0.00 | 0.04 |
| | Vendor | | 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 |
| | Worker | | 0.69 | 0.37 | 5.22 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| | Total | | **0.82** | **5.14** | **6.31** | **0.03** | **1.96** | **0.03** | **1.99** | **0.36** | **0.00** | **0.36** | **0.51** | **0.02** | **0.54** | **0.09** | **0.00** | **0.10** |
| ***TOTAL*** | | | ***1.69*** | ***13.02*** | ***13.94*** | ***0.04*** | ***4.87*** | ***0.49*** | ***5.37*** | ***0.89*** | ***0.09*** | ***0.98*** | ***0.96*** | ***0.47*** | ***1.43*** | ***0.17*** | ***0.09*** | ***0.26*** |

| Building Modernization | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | lbs/day | | | | lbs/day | | | tons/year | | | lbs/day | | | tons/year | | |
| | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
| Onsite | **2021** | | | | | | | | | | | | | | | | |
| Off-Road | | 0.78 | 7.99 | 7.26 | 0.01 | | 0.45 | 0.45 | 0.00 | 0.08 | 0.08 | | 0.41 | 0.41 | 0.00 | 0.08 | 0.08 |
| Total | | **0.78** | **7.99** | **7.26** | **0.01** | | **0.45** | **0.45** | **0.00** | **0.08** | **0.08** | | **0.41** | **0.41** | **0.00** | **0.08** | **0.08** |
| Offsite | | | | | | | | | | | | | | | | | |
| Hauling | | 0.01 | 0.44 | 0.10 | 0.00 | 0.08 | 0.00 | 0.08 | 0.01 | 0.00 | 0.01 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Vendor | | 0.08 | 2.71 | 0.69 | 0.01 | 0.16 | 0.01 | 0.17 | 0.03 | 0.00 | 0.03 | 0.05 | 0.01 | 0.05 | 0.01 | 0.00 | 0.01 |
| Worker | | 0.64 | 0.33 | 4.79 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| Total | | **0.74** | **3.48** | **5.58** | **0.02** | **1.46** | **0.02** | **1.48** | **0.27** | **0.00** | **0.27** | **0.39** | **0.02** | **0.41** | **0.07** | **0.00** | **0.07** |
| ***TOTAL*** | | ***1.51*** | ***11.46*** | ***12.84*** | ***0.03*** | ***1.46*** | ***0.46*** | ***1.92*** | ***0.27*** | ***0.08*** | ***0.35*** | ***0.39*** | ***0.43*** | ***0.82*** | ***0.07*** | ***0.08*** | ***0.15*** |
| Onsite | **2022** | | | | | | | | | | | | | | | | |
| Off-Road | | 0.69 | 7.03 | 7.15 | 0.01 | | 0.37 | 0.37 | 0.00 | 0.07 | 0.07 | | 0.34 | 0.34 | 0.00 | 0.06 | 0.06 |
| Total | | **0.69** | **7.03** | **7.15** | **0.01** | | **0.37** | **0.37** | **0.00** | **0.07** | **0.07** | | **0.34** | **0.34** | **0.00** | **0.06** | **0.06** |
| Offsite | | | | | | | | | | | | | | | | | |
| Hauling | | 0.01 | 0.40 | 0.10 | 0.00 | 0.07 | 0.00 | 0.07 | 0.01 | 0.00 | 0.01 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Vendor | | 0.08 | 2.58 | 0.64 | 0.01 | 0.16 | 0.01 | 0.17 | 0.03 | 0.00 | 0.03 | 0.05 | 0.01 | 0.05 | 0.01 | 0.00 | 0.01 |
| Worker | | 0.60 | 0.30 | 4.41 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| Total | | **0.69** | **3.27** | **5.14** | **0.02** | **1.45** | **0.02** | **1.46** | **0.26** | **0.00** | **0.27** | **0.39** | **0.01** | **0.40** | **0.07** | **0.00** | **0.07** |
| ***TOTAL*** | | ***1.37*** | ***10.30*** | ***12.30*** | ***0.03*** | ***1.45*** | ***0.39*** | ***1.83*** | ***0.26*** | ***0.07*** | ***0.33*** | ***0.39*** | ***0.36*** | ***0.74*** | ***0.07*** | ***0.07*** | ***0.14*** |
| Onsite | **2023** | | | | | | | | | | | | | | | | |
| Off-Road | | 0.63 | 6.42 | 7.10 | 0.01 | | 0.32 | 0.32 | 0.00 | 0.06 | 0.06 | | 0.29 | 0.29 | 0.00 | 0.05 | 0.05 |
| Total | | **0.63** | **6.42** | **7.10** | **0.01** | | **0.32** | **0.32** | **0.00** | **0.06** | **0.06** | | **0.29** | **0.29** | **0.00** | **0.05** | **0.05** |
| Offsite | | | | | | | | | | | | | | | | | |
| Hauling | | 0.01 | 0.31 | 0.09 | 0.00 | 0.08 | 0.00 | 0.08 | 0.01 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Vendor | | 0.06 | 2.19 | 0.57 | 0.01 | 0.16 | 0.00 | 0.17 | 0.03 | 0.00 | 0.03 | 0.05 | 0.00 | 0.05 | 0.01 | 0.00 | 0.01 |
| Worker | | 0.56 | 0.27 | 4.06 | 0.01 | 1.22 | 0.01 | 1.22 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| Total | | **0.63** | **2.76** | **4.71** | **0.02** | **1.46** | **0.01** | **1.47** | **0.27** | **0.00** | **0.27** | **0.39** | **0.01** | **0.40** | **0.07** | **0.00** | **0.07** |
| ***TOTAL*** | | ***1.26*** | ***9.18*** | ***11.81*** | ***0.03*** | ***1.46*** | ***0.33*** | ***1.79*** | ***0.27*** | ***0.06*** | ***0.33*** | ***0.39*** | ***0.31*** | ***0.70*** | ***0.07*** | ***0.06*** | ***0.13*** |
| Onsite | **2020-2023** | | | | | | | | | | | | | | | | |
| Off-Road | | 0.78 | 7.99 | 7.26 | 0.01 | 0.00 | 0.45 | 0.45 | 0.00 | 0.08 | 0.08 | 0.00 | 0.41 | 0.41 | 0.00 | 0.08 | 0.08 |
| Total | | **0.78** | **7.99** | **7.26** | **0.01** | **0.00** | **0.45** | **0.45** | **0.00** | **0.08** | **0.08** | **0.00** | **0.41** | **0.41** | **0.00** | **0.08** | **0.08** |
| Offsite | | | | | | | | | | | | | | | | | |
| Hauling | | 0.01 | 0.44 | 0.10 | 0.00 | 0.08 | 0.00 | 0.08 | 0.01 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Vendor | | 0.08 | 2.71 | 0.69 | 0.01 | 0.16 | 0.01 | 0.17 | 0.03 | 0.00 | 0.03 | 0.05 | 0.01 | 0.05 | 0.01 | 0.00 | 0.01 |
| Worker | | 0.64 | 0.33 | 4.79 | 0.01 | 1.22 | 0.01 | 1.23 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| Total | | **0.74** | **3.48** | **5.58** | **0.02** | **1.46** | **0.02** | **1.48** | **0.27** | **0.00** | **0.27** | **0.39** | **0.02** | **0.41** | **0.07** | **0.00** | **0.07** |
| ***TOTAL*** | | ***1.51*** | ***11.46*** | ***12.84*** | ***0.03*** | ***1.46*** | ***0.46*** | ***1.92*** | ***0.27*** | ***0.08*** | ***0.35*** | ***0.39*** | ***0.43*** | ***0.82*** | ***0.07*** | ***0.08*** | ***0.15*** |

| Architectural Coating | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | lbs/day | | | | lbs/day | | | tons/year | | | lbs/day | | | tons/year | | |
| | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total |
| Onsite | **2023** | | | | | | | | | | | | | | | | |
| Archit. Coating | | 44.88 | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Off-Road | | 0.19 | 1.30 | 1.81 | 0.00 | | 0.07 | 0.07 | 0.00 | 0.01 | 0.01 | | 0.07 | 0.07 | 0.00 | 0.01 | 0.01 |
| Total | | 45.07 | 1.30 | 1.81 | 0.00 | | 0.07 | 0.07 | **0.00** | **0.01** | **0.01** | | 0.07 | 0.07 | **0.00** | **0.01** | **0.01** |
| Offsite | | | | | | | | | | | | | | | | | |
| Hauling | | 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 |
| Vendor | | 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 |
| Worker | | 0.56 | 0.27 | 4.06 | 0.01 | 1.22 | 0.01 | 1.22 | 0.22 | 0.00 | 0.22 | 0.32 | 0.01 | 0.33 | 0.06 | 0.00 | 0.06 |
| Total | | 0.56 | 0.27 | 4.06 | 0.01 | 1.22 | 0.01 | 1.22 | **0.22** | **0.00** | **0.22** | 0.32 | 0.01 | 0.33 | **0.06** | **0.00** | **0.06** |
| ***TOTAL*** | | ***45.63*** | ***1.57*** | ***5.87*** | ***0.01*** | ***1.22*** | ***0.08*** | ***1.30*** | ***0.22*** | ***0.01*** | ***0.24*** | ***0.32*** | ***0.08*** | ***0.40*** | ***0.06*** | ***0.01*** | ***0.07*** |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MAX DAILY** | | **46** | **13** | **14** | **0** | **5** | **0** | **5** | **1** | **0** | **1** | **1** | **0** | **1** | **0** | **0** | **0** |
| **Regional Thresholds** | | **NA** | **85** | **NA** | **NA** | **NA** | **NA** | **80** | **NA** | **NA** | **14.6** | **NA** | **NA** | **82** | **NA** | **NA** | **15** |
| Exceeds Thresholds? | | No | No | No | No | No | No | No | No | No | No | No | No | No | No | No | No |

**Regional Operation Emissions Worksheet* - Unmitigated**

*CalEEMod, Version 2016.3.2 and EMFAC2017, Version 1.0.2

**Proposed Project**

| | lbs/day | | | | lbs/day | | | tons/year | | | lbs/day | | | tons/year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Summer** | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** |
| Area | 3.94 | 0.00 | 0.02 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mobile | 3.10 | 7.33 | 9.71 | 0.02 | 0.77 | 0.02 | 0.79 | 0.14 | 0.00 | 0.14 | 0.21 | 0.02 | 0.23 | 0.04 | 0.00 | 0.04 |
| Stationary | 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 |
| **Total** | **7.05** | **7.33** | **9.73** | **0.02** | **0.77** | **0.02** | **0.79** | **0.14** | **0.00** | **0.14** | **0.21** | **0.02** | **0.23** | **0.04** | **0.00** | **0.04** |

| **Max Daily** | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** |
| Area | 3.94 | 0.00 | 0.02 | 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 |
| Mobile | 3.10 | 7.33 | 9.71 | 0.02 | 0.77 | 0.02 | 0.79 | 0.14 | 0.00 | 0.14 | 0.21 | 0.02 | 0.23 | 0.04 | 0.00 | 0.04 |
| Stationary | 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 |
| **Total** | **7.05** | **7.33** | **9.73** | **0.02** | **0.77** | **0.02** | **0.79** | **0.14** | **0.00** | **0.14** | **0.21** | **0.02** | **0.23** | **0.04** | **0.00** | **0.04** |
| | | | | | | | | | | | | | | | | |
| **Regional Thresholds** | **65** | **65** | **NA** | **NA** | **NA** | **NA** | **80** | **NA** | **NA** | **14.6** | **NA** | **NA** | **55** | **NA** | **NA** | **15** |
| Exceeds Thresholds? | No | No | No | No | No | No | No | No | No | No | No | No | No | No | No | No |

## GHG Emissions Inventory

## Proposed Project Buildout

### Site Preparation

**Construction**

| | $MTCO_2e$ Total* |
|---|---|
| 2020 | 39 |
| 2021 | 376 |
| 2022 | 356 |
| 2023 | 297 |
| **Total Construction** | **1,068** |

*CalEEMod, Version 2016.3.2.

**Operation***

| **Proposed** | | | |
|---|---|---|---|
| Area | **0.004350** | $MTCO_2e$/Year** | 0.001060% |
| Mobile | **194** | $MTCO_2e$/Year | 47.2% |
| Stationary | **166** | $MTCO_2e$/Year | 40.6% |
| Solid Waste | **7** | $MTCO_2e$/Year | 1.7% |
| Water | **0.499100** | $MTCO_2e$/Year | 0.1% |
| Construction amoritized over 25-years | **43** | $MTCO_2e$/Year | 10.4% |
| **Total** | **410** | **$MTCO_2e$/Year** | 100.0% |
| SMAQMD Bright-Line Screening Threshold | 1,100 | $MTCO_2e$/Year | |
| **Exceed Threshold?** | **No** | | |

*CalEEMod, Version 2016.3.2.

** $MTCO_2e$=metric tons of carbon dioxide equivalent.