



*An Employee-Owned Company*

November 2, 2022

Mr. Rick España  
RNT Architects  
363 Fifth Avenue, Suite 202  
San Diego, CA 92101

Reference: Carlsbad Orion Center Project Air Quality and Greenhouse Gas Analysis  
(Project Number EIA-15-02; RECON Number 7663)

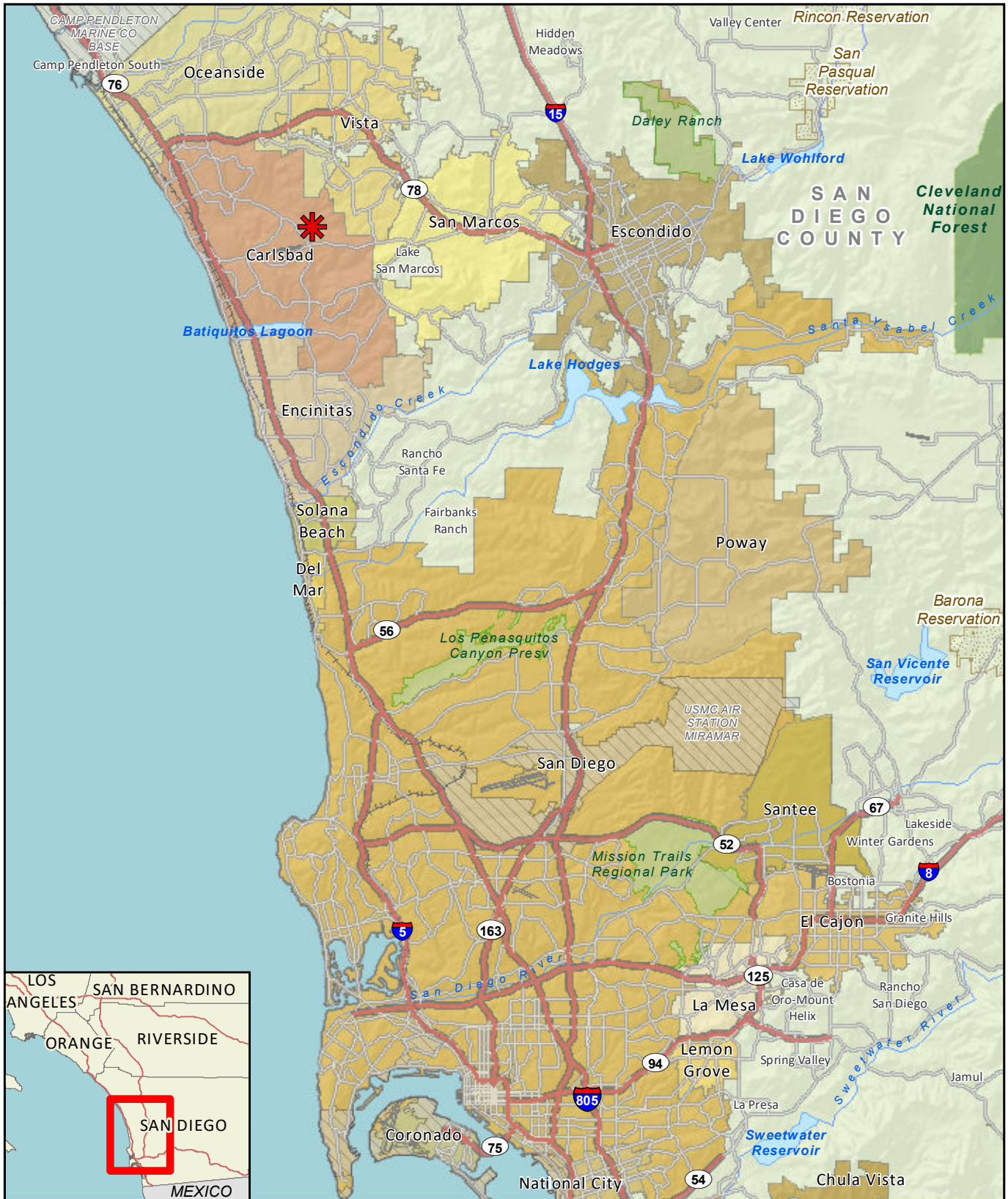
Dear Mr. España:

The purpose of this report is to evaluate potential air quality and greenhouse gas (GHG) impacts associated with construction and operation of the Carlsbad Orion Center Project (project). This analysis estimates project air quality and GHG emissions, identifies applicable significance thresholds, and assesses potential impacts associated with construction and operation of the project.

### **Project Description**

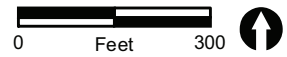
The project would be located on 8.5 acres of developed land at 2600 Orion Way, in the city of Carlsbad, California. Figure 1 provides the regional location of the project site. The project site is zoned Open Space (OS) and the General Plan land use designation is Public (P). The 8.5-acre project site is predominately asphalt-paved, with several islands with ornamental trees scattered throughout. Existing development on the site includes the a maintenance building at the northwest corner, an open air vehicle washing and refueling station near the center of the project site, and a central equipment plant that houses a cooling tower, boiler, and generator at the southeast corner of the project site. The site is currently used for fleet maintenance, parking and outdoor storage of vehicles, equipment, and materials. The project site and surrounding land uses are shown in Figure 2.

The existing site orientation, including the vehicle washing and fueling station and parking areas, was not strategically planned; rather, features were added individually over the past 40 years. The goal of the project is to construct a new operations master planned facility that would efficiently accommodate existing and future needs of the: (1) Construction Management and Inspection Division; (2) Public Works Fleet & Facilities Division (Street, Storm Drain, Facilities and Fleet Maintenance and Facilities Engineering); (3) Public Works Utilities Division (Water, Recycled Water, Wastewater Collection and Operations, Utilities Engineering and Asset Management); and (4) Parks and Recreation Department (Parks and Tree Maintenance). The proposed facility would accommodate 143 staff members from these existing facilities. The project would free up three existing sites in the city for redevelopment: The Public Works Utilities Division at 5950 El Camino Real, the Public Works Fleet & Facilities Division at 405 Oak Avenue, and the Parks and Tree Maintenance Division of the Parks & Recreation Department at 1166 Carlsbad Village Drive. However, these three abandoned sites would remain vacated and unchanged until redevelopment were proposed and approved as separate actions independent of this project.



 Project Location

FIGURE 1  
Regional Location



 Project Boundary

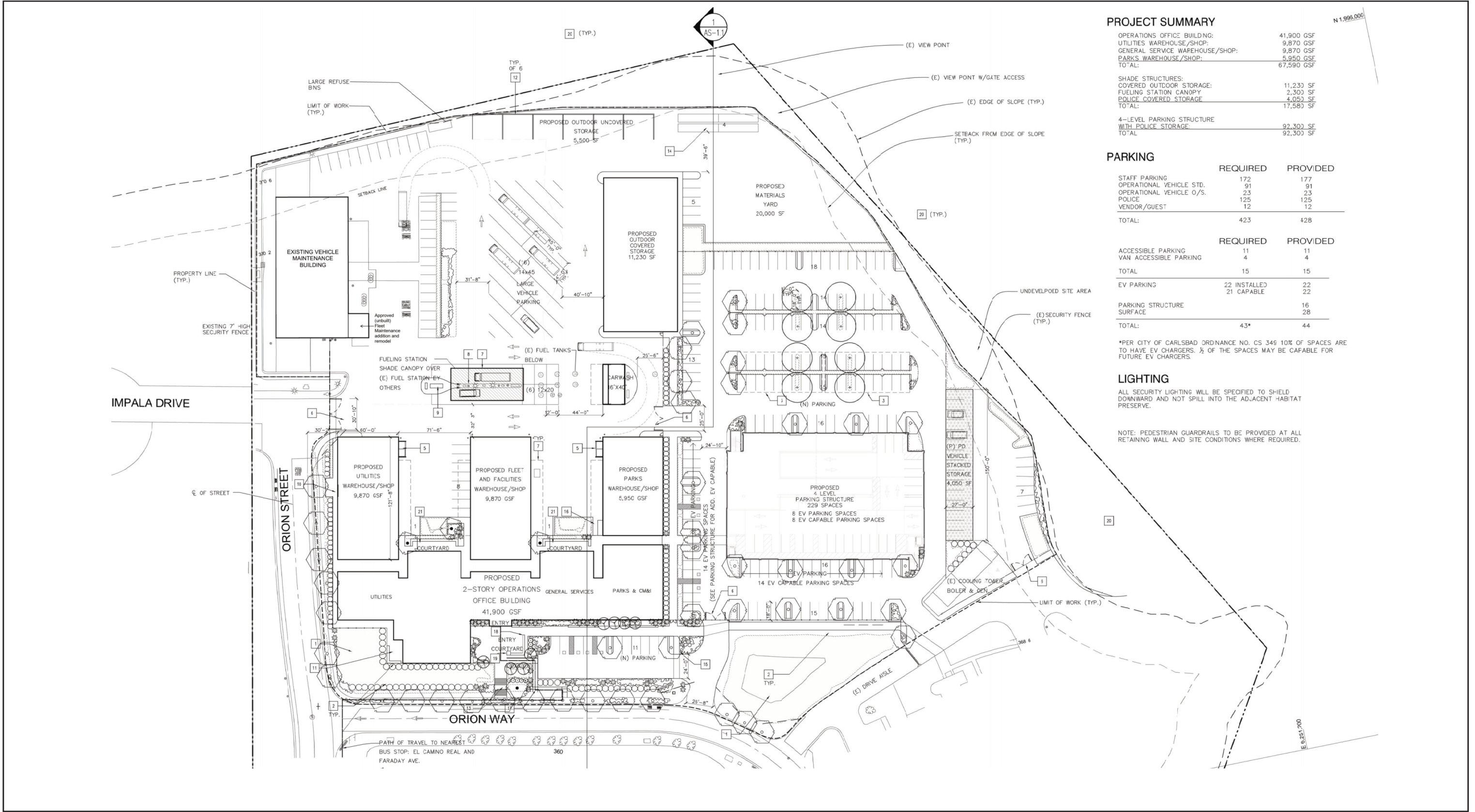
FIGURE 2  
Project Location on Aerial Photograph

Figure 3 shows the proposed site plan. The project includes the following development components:

- One 41,900-square-foot (SF) two-story office operations building;
- Two 9,870 SF warehouse/shop buildings, one for Public Works Utilities and one for Public Works Fleet & Facilities totaling 19,740 SF;
- One 5,950 SF warehouse/shop building for the Parks & Recreation Department;
- One 11,230 SF covered outdoor storage area for Public Works Utilities, Public Works Fleet & Facilities and Parks & Recreation personnel;
- One 92,300 SF four-story parking structure with 229 vehicle spaces; Within the first floor of the parking structure, 6,500 SF of enclosed conditioned space would be used for evidence storage by the Police Department;
- One 4,050 SF stacked vehicle covered storage area used for vehicles impounded by the Police Department; and
- One 640 SF carwash.

The total proposed new building area would be 175,810 SF. The two-story office building would be located near the southwest corner of the project site at the intersection of Orion Street and Orion Way. The first story of the office building would consist of shared office space with a south-facing front entrance oriented toward visitor parking north of Orion Way. The first floor would contain a lobby, offices, conference rooms, locker rooms, break rooms, and restrooms. Two outdoor patio areas would be accessible from the break rooms on the north side of the building. The second floor would consist of office space. At the eastern end of the second floor, a pedestrian bridge would provide a walkway connection to the second story of the proposed parking structure. The project would introduce eight biofiltration basins and two modular wetlands with combined pollutant control and flow control to satisfy hydromodification requirements.

The three warehouse/shop buildings would be located behind the two-story office building, with surface parking available between them. The building for the Public Works Utilities Division would be on the western end of the site. The building for the Public Works Fleet & Facilities Division would be centrally located. The building for the Parks & Recreation Department would be located between the Public Works Fleet & Facilities warehouse building and the four-level parking structure. The first story of the warehouse/shop buildings would contain warehousing area and storage rooms. The second floors of the Public Works Utilities and Public Works Fleet & Facilities buildings would each include a 2,400 SF mezzanine level.



**PROJECT SUMMARY**

OPERATIONS OFFICE BUILDING:	41,900 GSF
UTILITIES WAREHOUSE/SHOP:	9,870 GSF
GENERAL SERVICE WAREHOUSE/SHOP:	9,870 GSF
PARKS WAREHOUSE/SHOP:	5,950 GSF
TOTAL:	67,590 GSF

SHADE STRUCTURES:	
COVERED OUTDOOR STORAGE:	11,230 SF
FUELING STATION CANOPY:	2,303 SF
POLICE COVERED STORAGE:	4,050 SF
TOTAL:	17,583 SF

4-LEVEL PARKING STRUCTURE WITH POLICE STORAGE:	92,303 SF
TOTAL:	92,303 SF

**PARKING**

	REQUIRED	PROVIDED
STAFF PARKING	172	177
OPERATIONAL VEHICLE STD.	91	91
OPERATIONAL VEHICLE O/S.	23	23
POLICE	125	125
VENDOR/GUEST	12	12
TOTAL:	423	428

	REQUIRED	PROVIDED
ACCESSIBLE PARKING	11	11
VAN ACCESSIBLE PARKING	4	4
TOTAL:	15	15

EV PARKING	22 INSTALLED	22
	21 CAPABLE	22

PARKING STRUCTURE SURFACE		16
		28
TOTAL:	43*	44

\*PER CITY OF CARLSBAD ORDINANCE NO. CS 348 10% OF SPACES ARE TO HAVE EV CHARGERS. 1/2 OF THE SPACES MAY BE CAPABLE FOR FUTURE EV CHARGERS.

**LIGHTING**

ALL SECURITY LIGHTING WILL BE SPECIFIED TO SHIELD DOWNWARD AND NOT SPILL INTO THE ADJACENT HABITAT PRESERVE.

NOTE: PEDESTRIAN GUARDRAILS TO BE PROVIDED AT ALL RETAINING WALL AND SITE CONDITIONS WHERE REQUIRED.

**GENERAL NOTES**

- A. ALL ITEMS ARE NEW U.O.N.
- B. SEE CIVIL DRAWINGS FOR GRADING, DRAINAGE AND UTILITY PLANS.
- C. SEE LANDSCAPE DRAWINGS FOR PLANTING AND LANDSCAPE RESTORATION PLANS.
- D. BUS STOPS: NEAREST BUS STOPS ARE ACROSS THE STR.
- E. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EMERGENCY VEHICLE ACCESS DURING CONSTRUCTION.
- F. CONTRACTOR SHALL PROTECT EXISTING NATIVE TREES AND VEGETATION FROM DAMAGE DURING CONSTRUCTION.
- G. ALL PAVING AND FINISH GRADES SHALL SLOPE AWAY FROM BUILDINGS.

**KEY NOTES**

- 1 BIOSWALE PLANTER / BASIN, SEE CIVIL DRAWINGS
- 2 RETAINING WALL, SEE CIVIL DRAWINGS
- 3 OPTIONAL PARKING SHADE CANOPIES W/ P.V. SOLAR PANELS
- 4 (E) STORAGE CONTAINERS AFTER RELOCATION
- 5 CMU TRASH ENCLOSURE
- 6 SECURITY GATE
- 7 FUELING STATION CANOPY BY OTHERS
- 8 (E) FUELING STATION TO BE REPLACED BY OTHERS
- 9 BACK-UP GENERATOR
- 10 CONC. LOADING DOCK
- 11 OUTDOOR MEETING DECK
- 12 CIP CONC. MATERIAL ENCLOSURE WALLS
- 13 CIP CONC. STAIRS
- 14 (E) CONTAINERS
- 15 RIDE/SHARE DROP OFF AREA
- 16 LONG-TERM BIKE LOCKER STORAGE
- 17 ACCESSIBLE RAMP
- 18 BIKE/SCOOTER STORAGE & SEATING AREA
- 19 TRANSIT INFORMATION KIOSK
- 20 SENSITIVE HABITAT
- 21 OUTDOOR EMPLOYEE EATING AREA

**LEGEND**

- (N) 6' HIGH SECURITY FENCE
- LIMIT OF WORK
- PATH OF TRAVEL TO NEAREST BUS STOP

**FIGURE 3**  
Site Plan

In addition to the new facilities described above, the project would make or consider the following improvements to existing facilities on-site:

- Remodel an existing fleet maintenance building in the northwestern portion of the project site to raise the northeastern portion of the roof to match the building height of the remainder of the building, expand the building by a maximum of 530 SF, and make interior improvements. The remodel was approved administratively in 2018. Since it would be designed and constructed with the Orion Center, the remodel is being considered with it. However, the remodel of the fleet maintenance building and construction of the Orion Center are separate projects and are not dependent on one other.
- Improve and repurpose an existing 20,000 SF materials storage yard within the eastern portion of the project site.
- Add a shade canopy and replace the existing fuel dispensers at the existing fueling station.

While the visitor parking would be accessed through Orion Way, employee parking to the north of the office building would be accessed through a gated entrance off the intersection of Orion Street and Impala Drive. The project would extend sidewalks along the northern side of Orion Way in the vicinity of the project site. Consistent with City of Carlsbad (City) policies on environmental sustainability, the office building would be designed to achieve equivalence with the Leadership in Energy and Environmental Design (LEED) rating level of silver or higher. Solar photovoltaic (PV) panels would be installed on the roof of the office building and the parking structure to support a goal of reaching a net-zero energy use facility.

The existing western fleet yard would include an upgraded and reoriented vehicle washing and refueling station and uncovered and covered storage areas. The improved vehicle washing and refueling station would be at the same location as the existing station and would include a shade canopy and an improved containment system for runoff of chemicals used for vehicle cleaning.

Proposed features that would be implemented within the existing eastern fleet yard include a 30-stall stacked parking structure, for impounded vehicles, an area for large vehicle parking, and the existing central equipment plant for standby generators, boilers, and cooling towers to support the facility. Whereas the western fleet yard would be primarily shared by the Public Works and Parks & Recreation Departments, most of the eastern fleet yard would support a large materials yard, employee parking for the entire project and a vehicle impound area for the City's Police Department. The eastern fleet yard would be accessed through a gate from the visitor parking lot off Orion Way.

Project construction would last for approximately 18 months. Construction would begin in fall 2024 at the earliest. All aspects of the project, including the remodel of the existing fleet maintenance building, are anticipated to be constructed in a single phase.

### **Modeling Methodology**

The project would result in short-term emissions from construction and long-term emissions associated with project operation. Construction and operational emissions associated with the project were modeled using the California Emissions Estimator Model (CalEEMod) software version 2020.0.0 (CAPCOA 2021; Attachment 1).

CalEEMod was developed with the participation of several state air districts and includes generalized parameters developed by the South Coast Air Quality Management District (SCAQMD) through surveys and take into account the size and type of development. CalEEMod parameters were used to estimate activities such as the duration of construction, the type and amount of construction equipment required, trip generation, and utility consumption. Where available, parameters were modified to reflect project-specific data. Modeling methodology and assumptions are summarized below.

### **Construction Emissions Modeling**

Construction-related activities are temporary, short-term sources of emissions. Sources of construction-related emissions include:

- Fugitive dust from grading activities;
- Equipment exhaust;
- Off-gassing from architectural coatings (paints, etc.) and paving; and
- Vehicle trips by workers, delivery trucks, and material-hauling trucks.

Project construction would last for approximately 18 months. Construction would begin in January 2024 at the earliest. Construction emissions were modeled beginning in 2022, however, this is conservative due to ongoing regulations that result in cleaner construction equipment over time. The specific construction schedule has not been developed at this time; thus, specific construction phasing and equipment parameters were estimated based on surveys performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District (SMAQMD) for typical construction projects. Following the recommendation of multiple air districts, construction-related GHG emissions were amortized over a 30-year period (to represent the equivalent annual emissions) and added to operational emissions to account for their contribution to GHG emissions over the lifetime of a project (SCAQMD 2009).

### **Operational Emissions Modeling**

Operation-related activities are long-term sources of emissions that occur throughout the life of a project. Direct sources of air and GHG emissions include:

- Mobile (on-road vehicle use)
- Energy Use (natural gas)
- Area (consumer products, landscaping equipment, architectural coatings)

Additional indirect sources of GHG emissions include:

- Energy Use (electricity)
- Water Use (supply, distribution, and treatment water and wastewater)
- Solid waste (disposal)

The project would centralize various maintenance and operations centers throughout the City and move all employees to the new consolidated location. Therefore, the project would have the same number of employees as the total of the existing four operations centers (143) and would only redistribute existing trips without adding any new trips to the roadway network. However, as a conservative analysis, emissions were calculated assuming they were new trips. Based on the traffic analysis prepared for the project (Chen Ryan

Associates 2019), the project would generate 1,120 daily trips. Based on the VMT analysis prepared for the project, the daily employee mileage for the project would be 24.92 miles per employee (Fehr and Peers 2021). This was multiplied by the total number of employees and then divided by the total number of office trips to generate an average trip length. Vehicle emission factors and fleet mix were based on regional averages from the California Air Resources Board's (CARB) Emission Factors 2017 (EMFAC2017) model.

Energy use emissions are typically generated directly by combustion of natural gas for space and water heating and indirectly by the generation of electricity from fossil fuels off-site in power plants. Project energy use was estimated from typical energy use for facilities of this type, and also account for the regulatory effects of the California RPS, and updates included in 2019 California Building Code (Energy Code). CalEEMod Version 2020.4.0 estimates the building energy use based on the application of the 2005, 2008, 2013, 2016, and 2019 standards. The project would be subject to the 2019 Title 24 Energy Code standards. Emissions were calculated using the default CalEEMod 2020.4.0 emission factors.

The project would be served by San Diego Gas & Electric (SDG&E). Therefore, SDG&E's specific energy-intensity factors (i.e., the amount of carbon dioxide [CO<sub>2</sub>], methane [CH<sub>4</sub>], and nitrous oxide [N<sub>2</sub>O] per kilowatt-hour) are used in the calculations of GHG emissions. Current SDG&E energy-intensity factors for year 2021 are included in CalEEMod 2020.4.0. As SDG&E continues to procure renewable energy sources in line with state goals, the energy-intensity factors will decrease. SDG&E energy intensity factors are shown in Table 1.

GHG	2021 (lbs/MWh)
Carbon Dioxide (CO <sub>2</sub> )	539.98
Methane (CH <sub>4</sub> )	0.033
Nitrous Oxide (N <sub>2</sub> O)	0.004

SOURCE: CAPCOA 2021.  
lbs = pounds; MWh = megawatt hour

Additionally, solar photovoltaic (PV) panels would be installed on the roof of the office building and the parking structure to support a goal of reaching a net-zero energy use facility. As a conservative analysis, the project was modeled assuming the installed solar PV panels would generate 50 percent of the project's required energy use.

Water use and wastewater generated at the project level results in indirect emissions associated from the energy used to supply, distribute, and treat water and wastewater. Similar to electricity consumed by the project, GHG emissions that result from the electricity used to supply, distribute, and treat the water and wastewater are affected by the energy-intensity factors. The direct GHG emissions associated with decomposition, i.e., CH<sub>4</sub> and N<sub>2</sub>O, are affected by the treatment processes, which would not be altered by the project. The project would be subject to CalGreen, which requires a 20 percent increase in indoor water use efficiency. However, as a conservative analysis, GHG emissions were modeled using default indoor and outdoor water consumption rates. In addition to water reductions under CalGreen, the GHG emissions from the energy used to transport the water are affected by RPS (see Table 1).



Solid waste emissions result from the anaerobic decomposition of organic waste in landfills. Solid waste and area emissions were calculated based on regional waste disposal rates identified by the California Department of Resources Recycling and Recovery. The methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method, using the degradable organic content of waste. GHG emissions associated with the project's waste disposal were calculated using these parameters. According to a CalRecycle report to the Legislature, as of 2013 California has achieved a statewide 50 percent diversion of solid waste from landfills through "reduce/recycle/compost" programs (CalRecycle 2015). However, Assembly Bill (AB) 341 mandates that 75 percent of the solid waste generated be reduced, recycled, or composted by 2020. As a conservative analysis, no reduction in solid waste GHG emissions was assumed.

Area source emissions would include air emissions (off-gassing of volatile organic compounds [VOC]) from application of architectural coatings, air and GHG emissions associated with the use of landscaping equipment (equipment exhaust), and air emissions associated with the use of consumer products (direct emission of VOC). Area source emissions were calculated based on regional use factors. Architectural coatings would be required to comply with the VOC content specifications identified in San Diego Air Pollution Control District (SDAPCD) Rule 67.1.1.

### **Significance Thresholds**

The California Environmental Quality Act (CEQA) Guidelines require Lead Agencies to adopt thresholds of significance. When adopting these thresholds, the amended guidelines allow Lead Agencies to develop their own significance thresholds and/or to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence.

### **Air Quality Significance Thresholds**

The City has not adopted air quality significance thresholds. The CEQA Initial Study Checklist states that "where available the significance criteria established by the applicable air quality management or air pollution control district may be relied upon." The project is in the San Diego Air Basin (SDAB), which is the jurisdiction of the SDAPCD.

The SDAPCD also does not provide specific numeric criteria for determining the significance of air quality impacts under CEQA. However, the district does specify Air Quality Impact Analysis "trigger" levels for criteria pollutant emissions associated with new or modified stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). The SDAPCD does not consider these trigger levels to represent adverse air quality impacts rather, if these trigger levels are exceeded by stationary sources associated with a project, the SDAPCD requires an air quality analysis to determine if a significant air quality impact would occur. This analysis uses SDAPCD trigger levels shown in Table 2 as air quality impact screening levels.

Table 2 Air Quality Impact Analysis Trigger Levels			
Pollutant	Emission Rate (pounds/hour)	Emission Rate (pounds/day)	Emission Rate (tons/year)
NO <sub>x</sub>	25	250	40
SO <sub>x</sub>	25	250	40
CO	100	550	100
PM <sub>10</sub>	--	100	15
Lead	--	3.2	0.6
ROG/VOC <sup>1</sup>	--	250	--
PM <sub>2.5</sub>	--	67	10
SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3 (SDAPCD 2016).			
<sup>1</sup> ROG threshold based on federal General Conformity <i>de minimus</i> levels for ozone precursors.			

### GHG Emissions Significance Thresholds

The City’s Climate Action Plan (CAP) was adopted September 2015 and subsequently revised in May 2020 (City of Carlsbad 2020a). The CAP is designed to reduce Carlsbad’s GHG emissions and streamline environmental review of future development projects in the City in accordance with CEQA. The CAP includes actions to carry out the General Plan’s goals and policies.

The CAP states that “the City has determined that new development projects emitting less than 900 MT CO<sub>2</sub>E annual GHG would not contribute considerably to cumulative climate change impacts.” A project that exceeds the 900 metric tons of carbon dioxide equivalent (MT CO<sub>2</sub>E) screening threshold shall comply with the CAP in one of two ways (City of Carlsbad 2020a):

- **Checklist Approach.** The Project Review Checklist contained in the CAP provides direction about measures to be incorporated in individual projects, which will be used during the normal development review process. Project features that help a project meet the provisions of the CAP shall then become part of project conditions of approval.
- **Self-Developed Program Approach.** Rather than use the standard checklist, project proponents can develop their own program that would result in the same outcome as the checklist. Appendix E of the CAP provides a non-exclusive list of potential mitigation measures that can be applied at the project level to reduce project-level GHG emissions. Other measures not listed in the appendix may be considered, provided that their effectiveness in reducing GHG emissions can be demonstrated. The self-developed program approach and selection of mitigation measures shall be subject to City review and approval.

**Project Emissions**

**Air Emissions**

Project air emissions were modeled as discussed above. Project air emissions are compared to SDAPCD screening levels in Table 3.

Table 3 Maximum Daily Construction and Operational Emissions (pounds/day)			
Pollutant	Project Emissions <sup>1</sup>	Screening Threshold	Exceeds Threshold?
<i>Construction Emissions</i>			
Oxides of Nitrogen (NO <sub>x</sub> )	33	250	No
Volatile Organic Compounds (VOC) <sup>2</sup>	21	250	No
Coarse Particulate Matter (PM <sub>10</sub> )	22	100	No
Fine Particulate Matter (PM <sub>2.5</sub> )	12	67	No
Oxides of Sulfur (SO <sub>x</sub> )	<1	250	No
Carbon Monoxide (CO)	23	550	No
<i>Operational Emissions<sup>3</sup></i>			
Oxides of Nitrogen (NO <sub>x</sub> )	2	250	No
Volatile Organic Compounds (VOC) <sup>2</sup>	5	250	No
Coarse Particulate Matter (PM <sub>10</sub> )	3	100	No
Fine Particulate Matter (PM <sub>2.5</sub> )	1	67	No
Oxides of Sulfur (SO <sub>x</sub> )	<1	250	No
Carbon Monoxide (CO)	17	550	No
SOURCE: SDAPCD, Rule 20.1, 20.2, and 20.3 (April 2016).			
<sup>1</sup> Average daily operations emissions vary by season. Worst-case (winter) emissions are shown.			
<sup>2</sup> CalEEMod estimates emission of reactive organic gases (ROG). ROG and VOC have substantially similar definitions; for purposes of this analysis, ROG and VOC are equivalent.			
<sup>3</sup> Average daily operations emissions vary by season. Worst-case emissions are shown.			

**GHG Emissions**

Project GHG emissions were modeled as discussed above. Project GHG emissions are compared to recommended 900 MT CO<sub>2</sub>E screening threshold in Table 4.

Table 4 Project GHG Emissions in 2020 (MT CO <sub>2</sub> E per year)	
Emissions Source	Project Emissions
Vehicles	403
Energy Use	224
Area Sources	<1
Water Use	118
Solid Waste Disposal	56
Construction <sup>1</sup>	27
<b>Total</b>	<b>828</b>
SOURCE: Attachment 1.	
<sup>1</sup> Following the recommendation of multiple air districts, including the SCAQMD, construction-related emissions were amortized over a 30-year period (to represent the equivalent annual emissions) and added to operational emissions.	

As shown in Table 4, project emissions would not exceed the 900 MT CO<sub>2</sub>E screening threshold identified in the City’s CAP. As mentioned previously, solar PV panels would be installed on the roof of the office building and the parking structure to support a goal of reaching a net-zero energy use facility. As a conservative analysis, the project was modeled assuming the installed solar PV panels would generate 50 percent of the project’s required energy use. Thus, if the project were to achieve net-zero energy use, the GHG emission associated with energy use would be less than those shown in Table 4. Because the project would emit less than 900 MT CO<sub>2</sub>E annually, the project would not contribute considerably to cumulative climate change impacts. Thus, GHG impacts would be less than significant.

In March 2019, the City Council adopted several ordinances aimed at reducing GHG in new construction and alterations to existing buildings. Projects requiring building permits will be subject to these ordinances, which address the following:

- Energy efficiency (Ord. No. CS-347)
- Solar photovoltaic systems (Ord. No. CS-347)
- Water heating systems using renewable energy (Ord. Nos. CS-347 and CS-348)
- Electric vehicle charging (Ord. No. CS-349)
- Transportation demand management (Ord. No. CS-350)

As discussed, projects that are projected to emit fewer than 900 MT CO<sub>2</sub>E annually would not make a considerable contribution to the cumulative impact of climate change, and therefore, do not need to demonstrate consistency with the CAP. However, as stated in the *City’s Guidance to Demonstrating Consistency with the Climate Action Plan for Discretionary Projects Subject to CEQA* (City of Carlsbad 2020b), regardless of this screening threshold, all projects requiring building permits are subject to the above-referenced CAP ordinances. Such projects are therefore required to show compliance with the ordinances through submittal of a completed Consistency Checklist and shown on site plans and building plans. The project’s Consistency Checklist is provided as Attachment 2. As demonstrated, the project would be consistent with all CAP ordinances.

## Conclusions

As shown in Table 3, project construction and operation emissions would not exceed the applicable screening thresholds for all pollutants, and air quality impacts would be less than significant.

As shown in Table 4, with the installation of solar PV panels that achieve at least 50 percent of the project's energy use, the project would result in the annual emission of 828 MT CO<sub>2</sub>E. This is less than the City's 900 MT CO<sub>2</sub>E screening threshold. Because the project would emit less than 900 MT CO<sub>2</sub>E annually, the project would not contribute considerably to cumulative climate change impacts. Additionally, the project would be consistent with all CAP ordinances. Thus, GHG impacts would be less than significant.

If you have any questions, please contact me at [jfleming@reconenvironmental.com](mailto:jfleming@reconenvironmental.com) or at (619) 308-9333, extension 177.

Sincerely,



Jessica Fleming  
Air Quality and Greenhouse Gas Specialist

JLF:sh

## References Cited

- California Air Pollution Control Officers Association (CAPCOA)  
2021 California Emissions Estimator model (CalEEMod). Version 2020.4.0. May.
- California Department of Resources Recycling and Recovery (CalRecycle)  
2015 AB 341 Report to the Legislature. August.
- Carlsbad, City of  
2020a Carlsbad Climate Action Plan. May.
- 2020b Guidance to Demonstrating Consistency with the Climate Action Plan for Discretionary Projects Subject to CEQA. Updated July.
- Chen Ryan Associates  
2019 Orion Center Operations and Maintenance Facility Revised Transportation Impact Analysis Report. Prepared for the City of Carlsbad. December 6.
- Fehr and Peers  
2021 Memorandum – Orion Center Operations and Maintenance Facility SB 743 Vehicle Miles Traveled (VMT) Analysis. Prepared for the City of Carlsbad. May 6.

San Diego Air Pollution Control District (SDAPCD)

2016 Resolution Adopting Amended Rule 20.1 – New Source Review – General Provisions; Rule 20.2 – New Source Review – Non-Major Stationary Sources; Rule 20.3 – New Source Review – Major Stationary Sources And Prevention of Significant Deterioration (PSD) Stationary Sources; Rule 20.4 – New Source Review – Portable Emission Units; and Rule 20.6 – Standards for Permit to Operate Air Quality Analysis, of Regulation II of the Rules and Regulations of the San Diego Air Pollution Control District. Resolution Number 16-041. April 27.

South Coast Air Quality Management District (SCAQMD)

2009 Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group 14. November 19. Accessed at <http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/ghgmtg14.pdf>.

## ATTACHMENTS

## **ATTACHMENT 1**

Air Quality and GHG Emissions Modeling



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**7663 Carlsbad M&O Facility  
San Diego County APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	41.90	1000sqft	0.96	41,900.00	0
Industrial Park	26.33	1000sqft	0.60	26,330.00	0
Unrefrigerated Warehouse-No Rail	41.78	1000sqft	0.96	41,780.00	0
Other Asphalt Surfaces	2.96	Acre	2.96	128,937.60	0
Unenclosed Parking with Elevator	225.00	Space	2.02	85,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2023
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	539.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -  
 Land Use - 7.5 acres  
 Construction Phase - 18 months construction  
 Grading -  
 Architectural Coating - SDAPCD Rule 67.0.1

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Vehicle Trips - 1,120 ADT

Office - 838 (20/ksf)

Industrial - 211 (8.01/ksf)

Storage - 71 (1.70/ksf)

143 employees, 24.92 VMT/employee = 3,563.56 VMT = 4.25 miles/trip

Area Coating - SDAPCD Rule 67.0.1

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	230.00	323.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	10.00	14.00
tblLandUse	LandUseSquareFeet	90,000.00	85,800.00
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

tblVehicleTrips	ST_TR	2.21	4.54
tblVehicleTrips	ST_TR	2.54	6.04
tblVehicleTrips	ST_TR	1.74	1.70
tblVehicleTrips	SU_TR	0.70	0.14
tblVehicleTrips	SU_TR	1.24	2.95
tblVehicleTrips	SU_TR	1.74	1.70
tblVehicleTrips	WD_TR	9.74	20.00
tblVehicleTrips	WD_TR	3.37	8.01
tblVehicleTrips	WD_TR	1.74	1.70

**2.0 Emissions Summary**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	0.1728	1.5682	1.5012	3.3500e-003	0.3177	0.0714	0.3892	0.1406	0.0667	0.2073	0.0000	300.3645	300.3645	0.0536	0.0104	304.7951
2023	0.8421	1.9874	2.4167	5.4600e-003	0.1580	0.0858	0.2437	0.0428	0.0807	0.1235	0.0000	491.4518	491.4518	0.0743	0.0190	498.9695
<b>Maximum</b>	<b>0.8421</b>	<b>1.9874</b>	<b>2.4167</b>	<b>5.4600e-003</b>	<b>0.3177</b>	<b>0.0858</b>	<b>0.3892</b>	<b>0.1406</b>	<b>0.0807</b>	<b>0.2073</b>	<b>0.0000</b>	<b>491.4518</b>	<b>491.4518</b>	<b>0.0743</b>	<b>0.0190</b>	<b>498.9695</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1728	1.5682	1.5012	3.3500e-003	0.3177	0.0714	0.3892	0.1406	0.0667	0.2073	0.0000	300.3642	300.3642	0.0536	0.0104	304.7949
2023	0.8421	1.9874	2.4167	5.4600e-003	0.1580	0.0858	0.2437	0.0428	0.0807	0.1235	0.0000	491.4515	491.4515	0.0743	0.0190	498.9691
<b>Maximum</b>	<b>0.8421</b>	<b>1.9874</b>	<b>2.4167</b>	<b>5.4600e-003</b>	<b>0.3177</b>	<b>0.0858</b>	<b>0.3892</b>	<b>0.1406</b>	<b>0.0807</b>	<b>0.2073</b>	<b>0.0000</b>	<b>491.4515</b>	<b>491.4515</b>	<b>0.0743</b>	<b>0.0190</b>	<b>498.9691</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	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	6-1-2022	8-31-2022	0.8238	0.8238
2	9-1-2022	11-30-2022	0.6827	0.6827
3	12-1-2022	2-28-2023	0.6342	0.6342
4	3-1-2023	5-31-2023	0.6220	0.6220
5	6-1-2023	8-31-2023	0.8869	0.8869
6	9-1-2023	9-30-2023	0.4185	0.4185
		Highest	0.8869	0.8869

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	0.5042	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-003
Energy	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	369.9538	369.9538	0.0194	3.5800e-003	371.5048
Mobile	0.3330	0.2983	2.4541	4.2300e-003	0.4246	3.6000e-003	0.4282	0.1133	3.3500e-003	0.1167	0.0000	395.1971	395.1971	0.0377	0.0222	402.7675
Waste						0.0000	0.0000		0.0000	0.0000	22.5097	0.0000	22.5097	1.3303	0.0000	55.7668
Water						0.0000	0.0000		0.0000	0.0000	7.3595	86.4028	93.7623	0.7612	0.0185	118.3010
<b>Total</b>	<b>0.8449</b>	<b>0.3687</b>	<b>2.5163</b>	<b>4.6500e-003</b>	<b>0.4246</b>	<b>8.9600e-003</b>	<b>0.4335</b>	<b>0.1133</b>	<b>8.7100e-003</b>	<b>0.1220</b>	<b>29.8692</b>	<b>851.5597</b>	<b>881.4289</b>	<b>2.1486</b>	<b>0.0443</b>	<b>948.3465</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5042	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-003
Energy	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	223.2810	223.2810	0.0104	2.4900e-003	224.2841
Mobile	0.3330	0.2983	2.4541	4.2300e-003	0.4246	3.6000e-003	0.4282	0.1133	3.3500e-003	0.1167	0.0000	395.1971	395.1971	0.0377	0.0222	402.7675
Waste						0.0000	0.0000		0.0000	0.0000	22.5097	0.0000	22.5097	1.3303	0.0000	55.7668
Water						0.0000	0.0000		0.0000	0.0000	7.3595	86.4028	93.7623	0.7612	0.0185	118.3010
<b>Total</b>	<b>0.8449</b>	<b>0.3687</b>	<b>2.5163</b>	<b>4.6500e-003</b>	<b>0.4246</b>	<b>8.9600e-003</b>	<b>0.4335</b>	<b>0.1133</b>	<b>8.7100e-003</b>	<b>0.1220</b>	<b>29.8692</b>	<b>704.8869</b>	<b>734.7561</b>	<b>2.1396</b>	<b>0.0432</b>	<b>801.1258</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.22</b>	<b>16.64</b>	<b>0.42</b>	<b>2.46</b>	<b>15.52</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	6/20/2022	5	14	
2	Grading	Grading	6/21/2022	7/28/2022	5	28	
3	Building Construction	Building Construction	7/29/2022	10/24/2023	5	323	

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4	Architectural Coating	Architectural Coating	7/26/2023	10/24/2023	5	65
5	Paving	Paving	10/25/2023	12/1/2023	5	28

**Acres of Grading (Site Preparation Phase): 21**

**Acres of Grading (Grading Phase): 28**

**Acres of Paving: 4.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 165,015; Non-Residential Outdoor: 55,005; Striped Parking Area: 12,884 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**



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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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	132.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1376	0.0000	0.1376	0.0707	0.0000	0.0707	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2316	0.1379	2.7000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	23.4076	23.4076	7.5700e-003	0.0000	23.5968
<b>Total</b>	<b>0.0222</b>	<b>0.2316</b>	<b>0.1379</b>	<b>2.7000e-004</b>	<b>0.1376</b>	<b>0.0113</b>	<b>0.1489</b>	<b>0.0707</b>	<b>0.0104</b>	<b>0.0811</b>	<b>0.0000</b>	<b>23.4076</b>	<b>23.4076</b>	<b>7.5700e-003</b>	<b>0.0000</b>	<b>23.5968</b>

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**3.2 Site Preparation - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	3.1000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8310	0.8310	3.0000e-005	2.0000e-005	0.8388
<b>Total</b>	<b>3.6000e-004</b>	<b>2.6000e-004</b>	<b>3.1000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.8310</b>	<b>0.8310</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>0.8388</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1376	0.0000	0.1376	0.0707	0.0000	0.0707	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2316	0.1379	2.7000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	23.4076	23.4076	7.5700e-003	0.0000	23.5968
<b>Total</b>	<b>0.0222</b>	<b>0.2316</b>	<b>0.1379</b>	<b>2.7000e-004</b>	<b>0.1376</b>	<b>0.0113</b>	<b>0.1489</b>	<b>0.0707</b>	<b>0.0104</b>	<b>0.0811</b>	<b>0.0000</b>	<b>23.4076</b>	<b>23.4076</b>	<b>7.5700e-003</b>	<b>0.0000</b>	<b>23.5968</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	3.1000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8310	0.8310	3.0000e-005	2.0000e-005	0.8388
<b>Total</b>	<b>3.6000e-004</b>	<b>2.6000e-004</b>	<b>3.1000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>1.0000e-005</b>	<b>1.0200e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.8310</b>	<b>0.8310</b>	<b>3.0000e-005</b>	<b>2.0000e-005</b>	<b>0.8388</b>

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0992	0.0000	0.0992	0.0480	0.0000	0.0480	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0273	0.2920	0.2138	4.2000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	36.4767	36.4767	0.0118	0.0000	36.7716
<b>Total</b>	<b>0.0273</b>	<b>0.2920</b>	<b>0.2138</b>	<b>4.2000e-004</b>	<b>0.0992</b>	<b>0.0132</b>	<b>0.1123</b>	<b>0.0480</b>	<b>0.0121</b>	<b>0.0601</b>	<b>0.0000</b>	<b>36.4767</b>	<b>36.4767</b>	<b>0.0118</b>	<b>0.0000</b>	<b>36.7716</b>

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**3.3 Grading - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.1000e-004	4.4000e-004	5.1600e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3850	1.3850	4.0000e-005	4.0000e-005	1.3980
<b>Total</b>	<b>6.1000e-004</b>	<b>4.4000e-004</b>	<b>5.1600e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3850</b>	<b>1.3850</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3980</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0992	0.0000	0.0992	0.0480	0.0000	0.0480	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0273	0.2920	0.2138	4.2000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	36.4766	36.4766	0.0118	0.0000	36.7716
<b>Total</b>	<b>0.0273</b>	<b>0.2920</b>	<b>0.2138</b>	<b>4.2000e-004</b>	<b>0.0992</b>	<b>0.0132</b>	<b>0.1123</b>	<b>0.0480</b>	<b>0.0121</b>	<b>0.0601</b>	<b>0.0000</b>	<b>36.4766</b>	<b>36.4766</b>	<b>0.0118</b>	<b>0.0000</b>	<b>36.7716</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.1000e-004	4.4000e-004	5.1600e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3850	1.3850	4.0000e-005	4.0000e-005	1.3980
<b>Total</b>	<b>6.1000e-004</b>	<b>4.4000e-004</b>	<b>5.1600e-003</b>	<b>2.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3850</b>	<b>1.3850</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3980</b>

**3.4 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	0.0947	0.8667	0.9082	1.4900e-003		0.0449	0.0449		0.0422	0.0422	0.0000	128.6075	128.6075	0.0308	0.0000	129.3778
<b>Total</b>	<b>0.0947</b>	<b>0.8667</b>	<b>0.9082</b>	<b>1.4900e-003</b>		<b>0.0449</b>	<b>0.0449</b>		<b>0.0422</b>	<b>0.0422</b>	<b>0.0000</b>	<b>128.6075</b>	<b>128.6075</b>	<b>0.0308</b>	<b>0.0000</b>	<b>129.3778</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5100e-003	0.1619	0.0530	6.3000e-004	0.0195	1.7000e-003	0.0212	5.6400e-003	1.6300e-003	7.2700e-003	0.0000	61.3419	61.3419	1.8600e-003	8.9100e-003	64.0438
Worker	0.0212	0.0154	0.1801	5.2000e-004	0.0588	3.4000e-004	0.0591	0.0156	3.1000e-004	0.0159	0.0000	48.3149	48.3149	1.5200e-003	1.3900e-003	48.7684
<b>Total</b>	<b>0.0277</b>	<b>0.1773</b>	<b>0.2331</b>	<b>1.1500e-003</b>	<b>0.0783</b>	<b>2.0400e-003</b>	<b>0.0803</b>	<b>0.0213</b>	<b>1.9400e-003</b>	<b>0.0232</b>	<b>0.0000</b>	<b>109.6568</b>	<b>109.6568</b>	<b>3.3800e-003</b>	<b>0.0103</b>	<b>112.8122</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0947	0.8667	0.9082	1.4900e-003		0.0449	0.0449		0.0422	0.0422	0.0000	128.6074	128.6074	0.0308	0.0000	129.3776
<b>Total</b>	<b>0.0947</b>	<b>0.8667</b>	<b>0.9082</b>	<b>1.4900e-003</b>		<b>0.0449</b>	<b>0.0449</b>		<b>0.0422</b>	<b>0.0422</b>	<b>0.0000</b>	<b>128.6074</b>	<b>128.6074</b>	<b>0.0308</b>	<b>0.0000</b>	<b>129.3776</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5100e-003	0.1619	0.0530	6.3000e-004	0.0195	1.7000e-003	0.0212	5.6400e-003	1.6300e-003	7.2700e-003	0.0000	61.3419	61.3419	1.8600e-003	8.9100e-003	64.0438
Worker	0.0212	0.0154	0.1801	5.2000e-004	0.0588	3.4000e-004	0.0591	0.0156	3.1000e-004	0.0159	0.0000	48.3149	48.3149	1.5200e-003	1.3900e-003	48.7684
<b>Total</b>	<b>0.0277</b>	<b>0.1773</b>	<b>0.2331</b>	<b>1.1500e-003</b>	<b>0.0783</b>	<b>2.0400e-003</b>	<b>0.0803</b>	<b>0.0213</b>	<b>1.9400e-003</b>	<b>0.0232</b>	<b>0.0000</b>	<b>109.6568</b>	<b>109.6568</b>	<b>3.3800e-003</b>	<b>0.0103</b>	<b>112.8122</b>

**3.4 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	0.1667	1.5248	1.7219	2.8600e-003		0.0742	0.0742		0.0698	0.0698	0.0000	245.7130	245.7130	0.0585	0.0000	247.1743
<b>Total</b>	<b>0.1667</b>	<b>1.5248</b>	<b>1.7219</b>	<b>2.8600e-003</b>		<b>0.0742</b>	<b>0.0742</b>		<b>0.0698</b>	<b>0.0698</b>	<b>0.0000</b>	<b>245.7130</b>	<b>245.7130</b>	<b>0.0585</b>	<b>0.0000</b>	<b>247.1743</b>

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**3.4 Building Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5900e-003	0.2494	0.0880	1.1500e-003	0.0373	1.4700e-003	0.0388	0.0108	1.4100e-003	0.0122	0.0000	112.7254	112.7254	3.4100e-003	0.0163	117.6780
Worker	0.0379	0.0262	0.3197	9.7000e-004	0.1122	6.2000e-004	0.1128	0.0298	5.7000e-004	0.0304	0.0000	89.8993	89.8993	2.6300e-003	2.4800e-003	90.7033
<b>Total</b>	<b>0.0445</b>	<b>0.2756</b>	<b>0.4077</b>	<b>2.1200e-003</b>	<b>0.1495</b>	<b>2.0900e-003</b>	<b>0.1516</b>	<b>0.0406</b>	<b>1.9800e-003</b>	<b>0.0426</b>	<b>0.0000</b>	<b>202.6247</b>	<b>202.6247</b>	<b>6.0400e-003</b>	<b>0.0188</b>	<b>208.3813</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1667	1.5248	1.7219	2.8600e-003		0.0742	0.0742		0.0698	0.0698	0.0000	245.7127	245.7127	0.0585	0.0000	247.1740
<b>Total</b>	<b>0.1667</b>	<b>1.5248</b>	<b>1.7219</b>	<b>2.8600e-003</b>		<b>0.0742</b>	<b>0.0742</b>		<b>0.0698</b>	<b>0.0698</b>	<b>0.0000</b>	<b>245.7127</b>	<b>245.7127</b>	<b>0.0585</b>	<b>0.0000</b>	<b>247.1740</b>



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**3.4 Building Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5900e-003	0.2494	0.0880	1.1500e-003	0.0373	1.4700e-003	0.0388	0.0108	1.4100e-003	0.0122	0.0000	112.7254	112.7254	3.4100e-003	0.0163	117.6780
Worker	0.0379	0.0262	0.3197	9.7000e-004	0.1122	6.2000e-004	0.1128	0.0298	5.7000e-004	0.0304	0.0000	89.8993	89.8993	2.6300e-003	2.4800e-003	90.7033
<b>Total</b>	<b>0.0445</b>	<b>0.2756</b>	<b>0.4077</b>	<b>2.1200e-003</b>	<b>0.1495</b>	<b>2.0900e-003</b>	<b>0.1516</b>	<b>0.0406</b>	<b>1.9800e-003</b>	<b>0.0426</b>	<b>0.0000</b>	<b>202.6247</b>	<b>202.6247</b>	<b>6.0400e-003</b>	<b>0.0188</b>	<b>208.3813</b>

**3.5 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	0.6035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2300e-003	0.0424	0.0589	1.0000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	8.2981	8.2981	5.0000e-004	0.0000	8.3105
<b>Total</b>	<b>0.6097</b>	<b>0.0424</b>	<b>0.0589</b>	<b>1.0000e-004</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>8.2981</b>	<b>8.2981</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>8.3105</b>

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**3.5 Architectural Coating - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.5800e-003	0.0193	6.0000e-005	6.7800e-003	4.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8400e-003	0.0000	5.4292	5.4292	1.6000e-004	1.5000e-004	5.4777
<b>Total</b>	<b>2.2900e-003</b>	<b>1.5800e-003</b>	<b>0.0193</b>	<b>6.0000e-005</b>	<b>6.7800e-003</b>	<b>4.0000e-005</b>	<b>6.8100e-003</b>	<b>1.8000e-003</b>	<b>3.0000e-005</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>5.4292</b>	<b>5.4292</b>	<b>1.6000e-004</b>	<b>1.5000e-004</b>	<b>5.4777</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2300e-003	0.0424	0.0589	1.0000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	8.2981	8.2981	5.0000e-004	0.0000	8.3105
<b>Total</b>	<b>0.6097</b>	<b>0.0424</b>	<b>0.0589</b>	<b>1.0000e-004</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>		<b>2.3000e-003</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>8.2981</b>	<b>8.2981</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>8.3105</b>

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**3.5 Architectural Coating - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.5800e-003	0.0193	6.0000e-005	6.7800e-003	4.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8400e-003	0.0000	5.4292	5.4292	1.6000e-004	1.5000e-004	5.4777
<b>Total</b>	<b>2.2900e-003</b>	<b>1.5800e-003</b>	<b>0.0193</b>	<b>6.0000e-005</b>	<b>6.7800e-003</b>	<b>4.0000e-005</b>	<b>6.8100e-003</b>	<b>1.8000e-003</b>	<b>3.0000e-005</b>	<b>1.8400e-003</b>	<b>0.0000</b>	<b>5.4292</b>	<b>5.4292</b>	<b>1.6000e-004</b>	<b>1.5000e-004</b>	<b>5.4777</b>

**3.6 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1427	0.2042	3.2000e-004		7.1400e-003	7.1400e-003		6.5700e-003	6.5700e-003	0.0000	28.0376	28.0376	9.0700e-003	0.0000	28.2643
Paving	3.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0183</b>	<b>0.1427</b>	<b>0.2042</b>	<b>3.2000e-004</b>		<b>7.1400e-003</b>	<b>7.1400e-003</b>		<b>6.5700e-003</b>	<b>6.5700e-003</b>	<b>0.0000</b>	<b>28.0376</b>	<b>28.0376</b>	<b>9.0700e-003</b>	<b>0.0000</b>	<b>28.2643</b>

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**3.6 Paving - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.9000e-004	4.8000e-003	1.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3493	1.3493	4.0000e-005	4.0000e-005	1.3613
<b>Total</b>	<b>5.7000e-004</b>	<b>3.9000e-004</b>	<b>4.8000e-003</b>	<b>1.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3493</b>	<b>1.3493</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3613</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1427	0.2042	3.2000e-004		7.1400e-003	7.1400e-003		6.5700e-003	6.5700e-003	0.0000	28.0376	28.0376	9.0700e-003	0.0000	28.2643
Paving	3.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0183</b>	<b>0.1427</b>	<b>0.2042</b>	<b>3.2000e-004</b>		<b>7.1400e-003</b>	<b>7.1400e-003</b>		<b>6.5700e-003</b>	<b>6.5700e-003</b>	<b>0.0000</b>	<b>28.0376</b>	<b>28.0376</b>	<b>9.0700e-003</b>	<b>0.0000</b>	<b>28.2643</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Paving - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.9000e-004	4.8000e-003	1.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3493	1.3493	4.0000e-005	4.0000e-005	1.3613
<b>Total</b>	<b>5.7000e-004</b>	<b>3.9000e-004</b>	<b>4.8000e-003</b>	<b>1.0000e-005</b>	<b>1.6800e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.3493</b>	<b>1.3493</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3613</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3330	0.2983	2.4541	4.2300e-003	0.4246	3.6000e-003	0.4282	0.1133	3.3500e-003	0.1167	0.0000	395.1971	395.1971	0.0377	0.0222	402.7675
Unmitigated	0.3330	0.2983	2.4541	4.2300e-003	0.4246	3.6000e-003	0.4282	0.1133	3.3500e-003	0.1167	0.0000	395.1971	395.1971	0.0377	0.0222	402.7675

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	838.00	190.23	5.87	793,337	793,337
Industrial Park	210.90	159.03	77.67	239,124	239,124
Other Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	71.03	71.03	71.03	102,538	102,538
<b>Total</b>	<b>1,119.93</b>	<b>420.29</b>	<b>154.57</b>	<b>1,134,998</b>	<b>1,134,998</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	4.25	4.25	4.25	33.00	48.00	19.00	77	19	4
Industrial Park	4.25	4.25	4.25	59.00	28.00	13.00	79	19	2
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	4.25	4.25	4.25	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Industrial Park	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unenclosed Parking with Elevator	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unrefrigerated Warehouse-No Rail	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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	146.6728	146.6728	8.9600e-003	1.0900e-003	147.2207
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	293.3456	293.3456	0.0179	2.1700e-003	294.4413
NaturalGas Mitigated	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	76.6082	76.6082	1.4700e-003	1.4000e-003	77.0635
NaturalGas Unmitigated	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	76.6082	76.6082	1.4700e-003	1.4000e-003	77.0635

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	839257	4.5300e-003	0.0411	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003	0.0000	44.7860	44.7860	8.6000e-004	8.2000e-004	45.0521
Industrial Park	527390	2.8400e-003	0.0259	0.0217	1.6000e-004		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	28.1435	28.1435	5.4000e-004	5.2000e-004	28.3108
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	68937	3.7000e-004	3.3800e-003	2.8400e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6787	3.6787	7.0000e-005	7.0000e-005	3.7006
<b>Total</b>		<b>7.7400e-003</b>	<b>0.0704</b>	<b>0.0591</b>	<b>4.3000e-004</b>		<b>5.3500e-003</b>	<b>5.3500e-003</b>		<b>5.3500e-003</b>	<b>5.3500e-003</b>	<b>0.0000</b>	<b>76.6082</b>	<b>76.6082</b>	<b>1.4700e-003</b>	<b>1.4100e-003</b>	<b>77.0635</b>



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**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	839257	4.5300e-003	0.0411	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003	0.0000	44.7860	44.7860	8.6000e-004	8.2000e-004	45.0521
Industrial Park	527390	2.8400e-003	0.0259	0.0217	1.6000e-004		1.9600e-003	1.9600e-003		1.9600e-003	1.9600e-003	0.0000	28.1435	28.1435	5.4000e-004	5.2000e-004	28.3108
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	68937	3.7000e-004	3.3800e-003	2.8400e-003	2.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	3.6787	3.6787	7.0000e-005	7.0000e-005	3.7006
<b>Total</b>		<b>7.7400e-003</b>	<b>0.0704</b>	<b>0.0591</b>	<b>4.3000e-004</b>		<b>5.3500e-003</b>	<b>5.3500e-003</b>		<b>5.3500e-003</b>	<b>5.3500e-003</b>	<b>0.0000</b>	<b>76.6082</b>	<b>76.6082</b>	<b>1.4700e-003</b>	<b>1.4100e-003</b>	<b>77.0635</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	542186	132.7981	8.1200e-003	9.8000e-004	133.2941
Industrial Park	340710	83.4504	5.1000e-003	6.2000e-004	83.7621
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	166452	40.7692	2.4900e-003	3.0000e-004	40.9215
Unrefrigerated Warehouse-No Rail	148319	36.3279	2.2200e-003	2.7000e-004	36.4636
<b>Total</b>		<b>293.3456</b>	<b>0.0179</b>	<b>2.1700e-003</b>	<b>294.4413</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.3 Energy by Land Use - Electricity**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	271093	66.3990	4.0600e-003	4.9000e-004	66.6471
Industrial Park	170355	41.7252	2.5500e-003	3.1000e-004	41.8811
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	83226	20.3846	1.2500e-003	1.5000e-004	20.4608
Unrefrigerated Warehouse-No Rail	74159.5	18.1640	1.1100e-003	1.3000e-004	18.2318
<b>Total</b>		<b>146.6728</b>	<b>8.9700e-003</b>	<b>1.0800e-003</b>	<b>147.2207</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.5042	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-003
Unmitigated	0.5042	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-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	0.0604					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4435					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-003
<b>Total</b>	<b>0.5042</b>	<b>3.0000e-005</b>	<b>3.1100e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.0400e-003</b>	<b>6.0400e-003</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>6.4400e-003</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0604					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4435					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9000e-004	3.0000e-005	3.1100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.0400e-003	6.0400e-003	2.0000e-005	0.0000	6.4400e-003
<b>Total</b>	<b>0.5042</b>	<b>3.0000e-005</b>	<b>3.1100e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.0400e-003</b>	<b>6.0400e-003</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>6.4400e-003</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	93.7623	0.7612	0.0185	118.3010
Unmitigated	93.7623	0.7612	0.0185	118.3010

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	7.44704 / 4.56432	38.5334	0.2449	6.0000e-003	46.4425
Industrial Park	6.08881 / 0	21.3504	0.1996	4.8300e-003	27.7791
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	9.66163 / 0	33.8785	0.3167	7.6600e-003	44.0794
<b>Total</b>		<b>93.7623</b>	<b>0.7612</b>	<b>0.0185</b>	<b>118.3010</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	7.44704 / 4.56432	38.5334	0.2449	6.0000e-003	46.4425
Industrial Park	6.08881 / 0	21.3504	0.1996	4.8300e-003	27.7791
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	9.66163 / 0	33.8785	0.3167	7.6600e-003	44.0794
<b>Total</b>		<b>93.7623</b>	<b>0.7612</b>	<b>0.0185</b>	<b>118.3010</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.5097	1.3303	0.0000	55.7668
Unmitigated	22.5097	1.3303	0.0000	55.7668

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	38.97	7.9106	0.4675	0.0000	19.5981
Industrial Park	32.65	6.6277	0.3917	0.0000	16.4197
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	39.27	7.9715	0.4711	0.0000	19.7489
<b>Total</b>		<b>22.5097</b>	<b>1.3303</b>	<b>0.0000</b>	<b>55.7667</b>



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**8.2 Waste by Land Use**

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	38.97	7.9106	0.4675	0.0000	19.5981
Industrial Park	32.65	6.6277	0.3917	0.0000	16.4197
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	39.27	7.9715	0.4711	0.0000	19.7489
<b>Total</b>		<b>22.5097</b>	<b>1.3303</b>	<b>0.0000</b>	<b>55.7667</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**7663 Carlsbad M&O Facility**  
**San Diego County APCD Air District, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	41.90	1000sqft	0.96	41,900.00	0
Industrial Park	26.33	1000sqft	0.60	26,330.00	0
Unrefrigerated Warehouse-No Rail	41.78	1000sqft	0.96	41,780.00	0
Other Asphalt Surfaces	2.96	Acre	2.96	128,937.60	0
Unenclosed Parking with Elevator	225.00	Space	2.02	85,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2023
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	539.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -  
 Land Use - 7.5 acres  
 Construction Phase - 18 months construction  
 Grading -  
 Architectural Coating - SDAPCD Rule 67.0.1

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Vehicle Trips - 1,120 ADT

Office - 838 (20/ksf)

Industrial - 211 (8.01/ksf)

Storage - 71 (1.70/ksf)

143 employees, 24.92 VMT/employee = 3,563.56 VMT = 4.25 miles/trip

Area Coating - SDAPCD Rule 67.0.1

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	230.00	323.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	10.00	14.00
tblLandUse	LandUseSquareFeet	90,000.00	85,800.00
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25

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tblVehicleTrips	ST_TR	2.21	4.54
tblVehicleTrips	ST_TR	2.54	6.04
tblVehicleTrips	ST_TR	1.74	1.70
tblVehicleTrips	SU_TR	0.70	0.14
tblVehicleTrips	SU_TR	1.24	2.95
tblVehicleTrips	SU_TR	1.74	1.70
tblVehicleTrips	WD_TR	9.74	20.00
tblVehicleTrips	WD_TR	3.37	8.01
tblVehicleTrips	WD_TR	1.74	1.70

**2.0 Emissions Summary**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	3.2227	33.1177	20.7289	0.0481	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,779.0474	4,779.0474	1.1961	0.2028	4,856.4159
2023	20.8288	18.2282	22.6760	0.0522	1.6569	0.7914	2.4483	0.4476	0.7489	1.1965	0.0000	5,181.9154	5,181.9154	0.7170	0.1985	5,258.3669
<b>Maximum</b>	<b>20.8288</b>	<b>33.1177</b>	<b>22.6760</b>	<b>0.0522</b>	<b>19.8049</b>	<b>1.6134</b>	<b>21.4183</b>	<b>10.1417</b>	<b>1.4843</b>	<b>11.6260</b>	<b>0.0000</b>	<b>5,181.9154</b>	<b>5,181.9154</b>	<b>1.1961</b>	<b>0.2028</b>	<b>5,258.3669</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2227	33.1177	20.7289	0.0481	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,779.0474	4,779.0474	1.1961	0.2028	4,856.4159
2023	20.8288	18.2282	22.6760	0.0522	1.6569	0.7914	2.4483	0.4476	0.7489	1.1965	0.0000	5,181.9154	5,181.9154	0.7170	0.1985	5,258.3669
<b>Maximum</b>	<b>20.8288</b>	<b>33.1177</b>	<b>22.6760</b>	<b>0.0522</b>	<b>19.8049</b>	<b>1.6134</b>	<b>21.4183</b>	<b>10.1417</b>	<b>1.4843</b>	<b>11.6260</b>	<b>0.0000</b>	<b>5,181.9154</b>	<b>5,181.9154</b>	<b>1.1961</b>	<b>0.2028</b>	<b>5,258.3669</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Energy	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
Mobile	2.4697	1.9369	16.5021	0.0306	3.0250	0.0251	3.0500	0.8058	0.0233	0.8292		3,146.8343	3,146.8343	0.2724	0.1630	3,202.2131
<b>Total</b>	<b>5.2763</b>	<b>2.3228</b>	<b>16.8605</b>	<b>0.0329</b>	<b>3.0250</b>	<b>0.0545</b>	<b>3.0795</b>	<b>0.8058</b>	<b>0.0528</b>	<b>0.8586</b>		<b>3,609.6266</b>	<b>3,609.6266</b>	<b>0.2815</b>	<b>0.1715</b>	<b>3,667.7600</b>

**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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Energy	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
Mobile	2.4697	1.9369	16.5021	0.0306	3.0250	0.0251	3.0500	0.8058	0.0233	0.8292		3,146.8343	3,146.8343	0.2724	0.1630	3,202.2131
<b>Total</b>	<b>5.2763</b>	<b>2.3228</b>	<b>16.8605</b>	<b>0.0329</b>	<b>3.0250</b>	<b>0.0545</b>	<b>3.0795</b>	<b>0.8058</b>	<b>0.0528</b>	<b>0.8586</b>		<b>3,609.6266</b>	<b>3,609.6266</b>	<b>0.2815</b>	<b>0.1715</b>	<b>3,667.7600</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	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	Site Preparation	Site Preparation	6/1/2022	6/20/2022	5	14	
2	Grading	Grading	6/21/2022	7/28/2022	5	28	
3	Building Construction	Building Construction	7/29/2022	10/24/2023	5	323	
4	Architectural Coating	Architectural Coating	7/26/2023	10/24/2023	5	65	
5	Paving	Paving	10/25/2023	12/1/2023	5	28	

**Acres of Grading (Site Preparation Phase): 21**

**Acres of Grading (Grading Phase): 28**

**Acres of Paving: 4.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 165,015; Non-Residential Outdoor: 55,005; Striped Parking Area: 12,884 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	132.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 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					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
<b>Total</b>	<b>3.1701</b>	<b>33.0835</b>	<b>19.6978</b>	<b>0.0380</b>	<b>19.6570</b>	<b>1.6126</b>	<b>21.2696</b>	<b>10.1025</b>	<b>1.4836</b>	<b>11.5860</b>		<b>3,686.0619</b>	<b>3,686.0619</b>	<b>1.1922</b>		<b>3,715.8655</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
<b>Total</b>	<b>0.0526</b>	<b>0.0342</b>	<b>0.4667</b>	<b>1.3500e-003</b>	<b>0.1479</b>	<b>8.4000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.7000e-004</b>	<b>0.0400</b>		<b>137.2688</b>	<b>137.2688</b>	<b>3.9400e-003</b>	<b>3.5400e-003</b>	<b>138.4219</b>

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**3.2 Site Preparation - 2022**

**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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
<b>Total</b>	<b>3.1701</b>	<b>33.0835</b>	<b>19.6978</b>	<b>0.0380</b>	<b>19.6570</b>	<b>1.6126</b>	<b>21.2696</b>	<b>10.1025</b>	<b>1.4836</b>	<b>11.5860</b>	<b>0.0000</b>	<b>3,686.0619</b>	<b>3,686.0619</b>	<b>1.1922</b>		<b>3,715.8655</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
<b>Total</b>	<b>0.0526</b>	<b>0.0342</b>	<b>0.4667</b>	<b>1.3500e-003</b>	<b>0.1479</b>	<b>8.4000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.7000e-004</b>	<b>0.0400</b>		<b>137.2688</b>	<b>137.2688</b>	<b>3.9400e-003</b>	<b>3.5400e-003</b>	<b>138.4219</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.046 4	2,872.046 4	0.9289		2,895.268 4
<b>Total</b>	<b>1.9486</b>	<b>20.8551</b>	<b>15.2727</b>	<b>0.0297</b>	<b>7.0826</b>	<b>0.9409</b>	<b>8.0234</b>	<b>3.4247</b>	<b>0.8656</b>	<b>4.2903</b>		<b>2,872.046 4</b>	<b>2,872.046 4</b>	<b>0.9289</b>		<b>2,895.268 4</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
<b>Total</b>	<b>0.0438</b>	<b>0.0285</b>	<b>0.3889</b>	<b>1.1200e-003</b>	<b>0.1232</b>	<b>7.0000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.4000e-004</b>	<b>0.0333</b>		<b>114.3907</b>	<b>114.3907</b>	<b>3.2800e-003</b>	<b>2.9500e-003</b>	<b>115.3516</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4
<b>Total</b>	<b>1.9486</b>	<b>20.8551</b>	<b>15.2727</b>	<b>0.0297</b>	<b>7.0826</b>	<b>0.9409</b>	<b>8.0234</b>	<b>3.4247</b>	<b>0.8656</b>	<b>4.2903</b>	<b>0.0000</b>	<b>2,872.046 4</b>	<b>2,872.046 4</b>	<b>0.9289</b>		<b>2,895.268 4</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
<b>Total</b>	<b>0.0438</b>	<b>0.0285</b>	<b>0.3889</b>	<b>1.1200e-003</b>	<b>0.1232</b>	<b>7.0000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.4000e-004</b>	<b>0.0333</b>		<b>114.3907</b>	<b>114.3907</b>	<b>3.2800e-003</b>	<b>2.9500e-003</b>	<b>115.3516</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1181	2.8186	0.9429	0.0113	0.3590	0.0306	0.3896	0.1033	0.0293	0.1327		1,218.0758	1,218.0758	0.0370	0.1768	1,271.6895
Worker	0.3854	0.2509	3.4226	9.8900e-003	1.0844	6.1400e-003	1.0905	0.2876	5.6500e-003	0.2933		1,006.6380	1,006.6380	0.0289	0.0260	1,015.0942
<b>Total</b>	<b>0.5035</b>	<b>3.0694</b>	<b>4.3655</b>	<b>0.0212</b>	<b>1.4433</b>	<b>0.0368</b>	<b>1.4801</b>	<b>0.3910</b>	<b>0.0350</b>	<b>0.4259</b>		<b>2,224.7139</b>	<b>2,224.7139</b>	<b>0.0659</b>	<b>0.2028</b>	<b>2,286.7837</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1181	2.8186	0.9429	0.0113	0.3590	0.0306	0.3896	0.1033	0.0293	0.1327		1,218.0758	1,218.0758	0.0370	0.1768	1,271.6895
Worker	0.3854	0.2509	3.4226	9.8900e-003	1.0844	6.1400e-003	1.0905	0.2876	5.6500e-003	0.2933		1,006.6380	1,006.6380	0.0289	0.0260	1,015.0942
<b>Total</b>	<b>0.5035</b>	<b>3.0694</b>	<b>4.3655</b>	<b>0.0212</b>	<b>1.4433</b>	<b>0.0368</b>	<b>1.4801</b>	<b>0.3910</b>	<b>0.0350</b>	<b>0.4259</b>		<b>2,224.7139</b>	<b>2,224.7139</b>	<b>0.0659</b>	<b>0.2028</b>	<b>2,286.7837</b>



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0633	2.2720	0.8188	0.0109	0.3590	0.0138	0.3728	0.1033	0.0132	0.1166		1,171.5489	1,171.5489	0.0355	0.1696	1,222.9867
Worker	0.3610	0.2242	3.1764	9.5800e-003	1.0844	5.8300e-003	1.0902	0.2876	5.3700e-003	0.2930		980.5667	980.5667	0.0263	0.0241	988.4170
<b>Total</b>	<b>0.4243</b>	<b>2.4962</b>	<b>3.9952</b>	<b>0.0204</b>	<b>1.4433</b>	<b>0.0197</b>	<b>1.4630</b>	<b>0.3910</b>	<b>0.0186</b>	<b>0.4096</b>		<b>2,152.1155</b>	<b>2,152.1155</b>	<b>0.0618</b>	<b>0.1938</b>	<b>2,211.4037</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0633	2.2720	0.8188	0.0109	0.3590	0.0138	0.3728	0.1033	0.0132	0.1166		1,171.5489	1,171.5489	0.0355	0.1696	1,222.9867
Worker	0.3610	0.2242	3.1764	9.5800e-003	1.0844	5.8300e-003	1.0902	0.2876	5.3700e-003	0.2930		980.5667	980.5667	0.0263	0.0241	988.4170
<b>Total</b>	<b>0.4243</b>	<b>2.4962</b>	<b>3.9952</b>	<b>0.0204</b>	<b>1.4433</b>	<b>0.0197</b>	<b>1.4630</b>	<b>0.3910</b>	<b>0.0186</b>	<b>0.4096</b>		<b>2,152.1155</b>	<b>2,152.1155</b>	<b>0.0618</b>	<b>0.1938</b>	<b>2,211.4037</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 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	18.5690					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
<b>Total</b>	<b>18.7607</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0711	0.0442	0.6257	1.8900e-003	0.2136	1.1500e-003	0.2147	0.0567	1.0600e-003	0.0577		193.1419	193.1419	5.1700e-003	4.7600e-003	194.6882
<b>Total</b>	<b>0.0711</b>	<b>0.0442</b>	<b>0.6257</b>	<b>1.8900e-003</b>	<b>0.2136</b>	<b>1.1500e-003</b>	<b>0.2147</b>	<b>0.0567</b>	<b>1.0600e-003</b>	<b>0.0577</b>		<b>193.1419</b>	<b>193.1419</b>	<b>5.1700e-003</b>	<b>4.7600e-003</b>	<b>194.6882</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Architectural Coating - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5690					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
<b>Total</b>	<b>18.7607</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0711	0.0442	0.6257	1.8900e-003	0.2136	1.1500e-003	0.2147	0.0567	1.0600e-003	0.0577		193.1419	193.1419	5.1700e-003	4.7600e-003	194.6882
<b>Total</b>	<b>0.0711</b>	<b>0.0442</b>	<b>0.6257</b>	<b>1.8900e-003</b>	<b>0.2136</b>	<b>1.1500e-003</b>	<b>0.2147</b>	<b>0.0567</b>	<b>1.0600e-003</b>	<b>0.0577</b>		<b>193.1419</b>	<b>193.1419</b>	<b>5.1700e-003</b>	<b>4.7600e-003</b>	<b>194.6882</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3097</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
<b>Total</b>	<b>0.0410</b>	<b>0.0255</b>	<b>0.3610</b>	<b>1.0900e-003</b>	<b>0.1232</b>	<b>6.6000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.1000e-004</b>	<b>0.0333</b>		<b>111.4280</b>	<b>111.4280</b>	<b>2.9800e-003</b>	<b>2.7400e-003</b>	<b>112.3201</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Paving - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3097</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
<b>Total</b>	<b>0.0410</b>	<b>0.0255</b>	<b>0.3610</b>	<b>1.0900e-003</b>	<b>0.1232</b>	<b>6.6000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.1000e-004</b>	<b>0.0333</b>		<b>111.4280</b>	<b>111.4280</b>	<b>2.9800e-003</b>	<b>2.7400e-003</b>	<b>112.3201</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	2.4697	1.9369	16.5021	0.0306	3.0250	0.0251	3.0500	0.8058	0.0233	0.8292		3,146.834 3	3,146.834 3	0.2724	0.1630	3,202.213 1
Unmitigated	2.4697	1.9369	16.5021	0.0306	3.0250	0.0251	3.0500	0.8058	0.0233	0.8292		3,146.834 3	3,146.834 3	0.2724	0.1630	3,202.213 1

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	838.00	190.23	5.87	793,337	793,337
Industrial Park	210.90	159.03	77.67	239,124	239,124
Other Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	71.03	71.03	71.03	102,538	102,538
<b>Total</b>	<b>1,119.93</b>	<b>420.29</b>	<b>154.57</b>	<b>1,134,998</b>	<b>1,134,998</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	4.25	4.25	4.25	33.00	48.00	19.00	77	19	4
Industrial Park	4.25	4.25	4.25	59.00	28.00	13.00	79	19	2

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	4.25	4.25	4.25	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Industrial Park	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unenclosed Parking with Elevator	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unrefrigerated Warehouse-No Rail	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Percent of Electricity Use Generated with Renewable Energy



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive 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	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
NaturalGas Unmitigated	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681

**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					
General Office Building	2299.33	0.0248	0.2254	0.1894	1.3500e-003		0.0171	0.0171		0.0171	0.0171		270.5099	270.5099	5.1800e-003	4.9600e-003	272.1174
Industrial Park	1444.9	0.0156	0.1417	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108		169.9887	169.9887	3.2600e-003	3.1200e-003	170.9988
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	188.868	2.0400e-003	0.0185	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2198	22.2198	4.3000e-004	4.1000e-004	22.3519
<b>Total</b>		<b>0.0424</b>	<b>0.3856</b>	<b>0.3239</b>	<b>2.3100e-003</b>		<b>0.0293</b>	<b>0.0293</b>		<b>0.0293</b>	<b>0.0293</b>		<b>462.7184</b>	<b>462.7184</b>	<b>8.8700e-003</b>	<b>8.4900e-003</b>	<b>465.4681</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas 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					
General Office Building	2.29933	0.0248	0.2254	0.1894	1.3500e-003		0.0171	0.0171		0.0171	0.0171		270.5099	270.5099	5.1800e-003	4.9600e-003	272.1174
Industrial Park	1.4449	0.0156	0.1417	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108		169.9887	169.9887	3.2600e-003	3.1200e-003	170.9988
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.188868	2.0400e-003	0.0185	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2198	22.2198	4.3000e-004	4.1000e-004	22.3519
<b>Total</b>		<b>0.0424</b>	<b>0.3856</b>	<b>0.3239</b>	<b>2.3100e-003</b>		<b>0.0293</b>	<b>0.0293</b>		<b>0.0293</b>	<b>0.0293</b>		<b>462.7184</b>	<b>462.7184</b>	<b>8.8700e-003</b>	<b>8.4900e-003</b>	<b>465.4681</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive 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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Unmitigated	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788

**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	0.3307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4303					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
<b>Total</b>	<b>2.7642</b>	<b>3.1000e-004</b>	<b>0.0345</b>	<b>0.0000</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>0.0740</b>	<b>0.0740</b>	<b>1.9000e-004</b>		<b>0.0788</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4303					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
<b>Total</b>	<b>2.7642</b>	<b>3.1000e-004</b>	<b>0.0345</b>	<b>0.0000</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>0.0740</b>	<b>0.0740</b>	<b>1.9000e-004</b>		<b>0.0788</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**7663 Carlsbad M&O Facility  
San Diego County APCD Air District, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	41.90	1000sqft	0.96	41,900.00	0
Industrial Park	26.33	1000sqft	0.60	26,330.00	0
Unrefrigerated Warehouse-No Rail	41.78	1000sqft	0.96	41,780.00	0
Other Asphalt Surfaces	2.96	Acre	2.96	128,937.60	0
Unenclosed Parking with Elevator	225.00	Space	2.02	85,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2023
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	539.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -  
 Land Use - 7.5 acres  
 Construction Phase - 18 months construction  
 Grading -  
 Architectural Coating - SDAPCD Rule 67.0.1

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Vehicle Trips - 1,120 ADT

Office - 838 (20/ksf)

Industrial - 211 (8.01/ksf)

Storage - 71 (1.70/ksf)

143 employees, 24.92 VMT/employee = 3,563.56 VMT = 4.25 miles/trip

Area Coating - SDAPCD Rule 67.0.1

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	230.00	323.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	20.00	28.00
tblConstructionPhase	NumDays	10.00	14.00
tblLandUse	LandUseSquareFeet	90,000.00	85,800.00
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CC_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CNW_TL	7.30	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25
tblVehicleTrips	CW_TL	9.50	4.25

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

tblVehicleTrips	ST_TR	2.21	4.54
tblVehicleTrips	ST_TR	2.54	6.04
tblVehicleTrips	ST_TR	1.74	1.70
tblVehicleTrips	SU_TR	0.70	0.14
tblVehicleTrips	SU_TR	1.24	2.95
tblVehicleTrips	SU_TR	1.74	1.70
tblVehicleTrips	WD_TR	9.74	20.00
tblVehicleTrips	WD_TR	3.37	8.01
tblVehicleTrips	WD_TR	1.74	1.70

**2.0 Emissions Summary**

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7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	3.2270	33.1220	20.5804	0.0476	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,724.189 2	4,724.189 2	1.1963	0.2051	4,802.306 0
2023	20.8635	18.3572	22.5115	0.0516	1.6569	0.7914	2.4483	0.4476	0.7490	1.1966	0.0000	5,119.064 5	5,119.064 5	0.7172	0.2013	5,196.383 2
<b>Maximum</b>	<b>20.8635</b>	<b>33.1220</b>	<b>22.5115</b>	<b>0.0516</b>	<b>19.8049</b>	<b>1.6134</b>	<b>21.4183</b>	<b>10.1417</b>	<b>1.4843</b>	<b>11.6260</b>	<b>0.0000</b>	<b>5,119.064 5</b>	<b>5,119.064 5</b>	<b>1.1963</b>	<b>0.2051</b>	<b>5,196.383 2</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2270	33.1220	20.5804	0.0476	19.8049	1.6134	21.4183	10.1417	1.4843	11.6260	0.0000	4,724.189 2	4,724.189 2	1.1963	0.2051	4,802.306 0
2023	20.8635	18.3572	22.5115	0.0516	1.6569	0.7914	2.4483	0.4476	0.7490	1.1966	0.0000	5,119.064 5	5,119.064 5	0.7172	0.2013	5,196.383 2
<b>Maximum</b>	<b>20.8635</b>	<b>33.1220</b>	<b>22.5115</b>	<b>0.0516</b>	<b>19.8049</b>	<b>1.6134</b>	<b>21.4183</b>	<b>10.1417</b>	<b>1.4843</b>	<b>11.6260</b>	<b>0.0000</b>	<b>5,119.064 5</b>	<b>5,119.064 5</b>	<b>1.1963</b>	<b>0.2051</b>	<b>5,196.383 2</b>



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Energy	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
Mobile	2.3739	2.1095	17.5993	0.0293	3.0250	0.0251	3.0501	0.8058	0.0234	0.8292		3,014.9833	3,014.9833	0.2976	0.1731	3,074.0165
<b>Total</b>	<b>5.1805</b>	<b>2.4954</b>	<b>17.9577</b>	<b>0.0316</b>	<b>3.0250</b>	<b>0.0545</b>	<b>3.0795</b>	<b>0.8058</b>	<b>0.0528</b>	<b>0.8586</b>		<b>3,477.7757</b>	<b>3,477.7757</b>	<b>0.3067</b>	<b>0.1816</b>	<b>3,539.5634</b>

**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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Energy	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
Mobile	2.3739	2.1095	17.5993	0.0293	3.0250	0.0251	3.0501	0.8058	0.0234	0.8292		3,014.9833	3,014.9833	0.2976	0.1731	3,074.0165
<b>Total</b>	<b>5.1805</b>	<b>2.4954</b>	<b>17.9577</b>	<b>0.0316</b>	<b>3.0250</b>	<b>0.0545</b>	<b>3.0795</b>	<b>0.8058</b>	<b>0.0528</b>	<b>0.8586</b>		<b>3,477.7757</b>	<b>3,477.7757</b>	<b>0.3067</b>	<b>0.1816</b>	<b>3,539.5634</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	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	Site Preparation	Site Preparation	6/1/2022	6/20/2022	5	14	
2	Grading	Grading	6/21/2022	7/28/2022	5	28	
3	Building Construction	Building Construction	7/29/2022	10/24/2023	5	323	
4	Architectural Coating	Architectural Coating	7/26/2023	10/24/2023	5	65	
5	Paving	Paving	10/25/2023	12/1/2023	5	28	

**Acres of Grading (Site Preparation Phase): 21**

**Acres of Grading (Grading Phase): 28**

**Acres of Paving: 4.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 165,015; Non-Residential Outdoor: 55,005; Striped Parking Area: 12,884 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	132.00	53.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 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					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
<b>Total</b>	<b>3.1701</b>	<b>33.0835</b>	<b>19.6978</b>	<b>0.0380</b>	<b>19.6570</b>	<b>1.6126</b>	<b>21.2696</b>	<b>10.1025</b>	<b>1.4836</b>	<b>11.5860</b>		<b>3,686.0619</b>	<b>3,686.0619</b>	<b>1.1922</b>		<b>3,715.8655</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
<b>Total</b>	<b>0.0568</b>	<b>0.0385</b>	<b>0.4425</b>	<b>1.2700e-003</b>	<b>0.1479</b>	<b>8.4000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.7000e-004</b>	<b>0.0400</b>		<b>129.7029</b>	<b>129.7029</b>	<b>4.1900e-003</b>	<b>3.8300e-003</b>	<b>130.9484</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
<b>Total</b>	<b>3.1701</b>	<b>33.0835</b>	<b>19.6978</b>	<b>0.0380</b>	<b>19.6570</b>	<b>1.6126</b>	<b>21.2696</b>	<b>10.1025</b>	<b>1.4836</b>	<b>11.5860</b>	<b>0.0000</b>	<b>3,686.0619</b>	<b>3,686.0619</b>	<b>1.1922</b>		<b>3,715.8655</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
<b>Total</b>	<b>0.0568</b>	<b>0.0385</b>	<b>0.4425</b>	<b>1.2700e-003</b>	<b>0.1479</b>	<b>8.4000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.7000e-004</b>	<b>0.0400</b>		<b>129.7029</b>	<b>129.7029</b>	<b>4.1900e-003</b>	<b>3.8300e-003</b>	<b>130.9484</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.046 4	2,872.046 4	0.9289		2,895.268 4
<b>Total</b>	<b>1.9486</b>	<b>20.8551</b>	<b>15.2727</b>	<b>0.0297</b>	<b>7.0826</b>	<b>0.9409</b>	<b>8.0234</b>	<b>3.4247</b>	<b>0.8656</b>	<b>4.2903</b>		<b>2,872.046 4</b>	<b>2,872.046 4</b>	<b>0.9289</b>		<b>2,895.268 4</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
<b>Total</b>	<b>0.0474</b>	<b>0.0321</b>	<b>0.3688</b>	<b>1.0600e-003</b>	<b>0.1232</b>	<b>7.0000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.4000e-004</b>	<b>0.0333</b>		<b>108.0858</b>	<b>108.0858</b>	<b>3.4900e-003</b>	<b>3.1900e-003</b>	<b>109.1237</b>



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.046 4	2,872.046 4	0.9289		2,895.268 4
<b>Total</b>	<b>1.9486</b>	<b>20.8551</b>	<b>15.2727</b>	<b>0.0297</b>	<b>7.0826</b>	<b>0.9409</b>	<b>8.0234</b>	<b>3.4247</b>	<b>0.8656</b>	<b>4.2903</b>	<b>0.0000</b>	<b>2,872.046 4</b>	<b>2,872.046 4</b>	<b>0.9289</b>		<b>2,895.268 4</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
<b>Total</b>	<b>0.0474</b>	<b>0.0321</b>	<b>0.3688</b>	<b>1.0600e-003</b>	<b>0.1232</b>	<b>7.0000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.4000e-004</b>	<b>0.0333</b>		<b>108.0858</b>	<b>108.0858</b>	<b>3.4900e-003</b>	<b>3.1900e-003</b>	<b>109.1237</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1170	2.9249	0.9720	0.0113	0.3590	0.0307	0.3897	0.1033	0.0294	0.1327		1,218.7011	1,218.7011	0.0369	0.1771	1,272.3854
Worker	0.4168	0.2821	3.2451	9.3500e-003	1.0844	6.1400e-003	1.0905	0.2876	5.6500e-003	0.2933		951.1546	951.1546	0.0307	0.0281	960.2884
<b>Total</b>	<b>0.5338</b>	<b>3.2071</b>	<b>4.2170</b>	<b>0.0207</b>	<b>1.4433</b>	<b>0.0369</b>	<b>1.4802</b>	<b>0.3910</b>	<b>0.0351</b>	<b>0.4260</b>		<b>2,169.8557</b>	<b>2,169.8557</b>	<b>0.0676</b>	<b>0.2051</b>	<b>2,232.6738</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1170	2.9249	0.9720	0.0113	0.3590	0.0307	0.3897	0.1033	0.0294	0.1327		1,218.7011	1,218.7011	0.0369	0.1771	1,272.3854
Worker	0.4168	0.2821	3.2451	9.3500e-003	1.0844	6.1400e-003	1.0905	0.2876	5.6500e-003	0.2933		951.1546	951.1546	0.0307	0.0281	960.2884
<b>Total</b>	<b>0.5338</b>	<b>3.2071</b>	<b>4.2170</b>	<b>0.0207</b>	<b>1.4433</b>	<b>0.0369</b>	<b>1.4802</b>	<b>0.3910</b>	<b>0.0351</b>	<b>0.4260</b>		<b>2,169.8557</b>	<b>2,169.8557</b>	<b>0.0676</b>	<b>0.2051</b>	<b>2,232.6738</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0616	2.3676	0.8435	0.0109	0.3590	0.0139	0.3729	0.1033	0.0133	0.1166		1,173.2144	1,173.2144	0.0353	0.1700	1,224.7662
Worker	0.3914	0.2521	3.0183	9.0500e-003	1.0844	5.8300e-003	1.0902	0.2876	5.3700e-003	0.2930		926.6668	926.6668	0.0280	0.0261	935.1464
<b>Total</b>	<b>0.4530</b>	<b>2.6197</b>	<b>3.8618</b>	<b>0.0199</b>	<b>1.4433</b>	<b>0.0197</b>	<b>1.4630</b>	<b>0.3910</b>	<b>0.0187</b>	<b>0.4096</b>		<b>2,099.8813</b>	<b>2,099.8813</b>	<b>0.0633</b>	<b>0.1961</b>	<b>2,159.9126</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Building Construction - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0616	2.3676	0.8435	0.0109	0.3590	0.0139	0.3729	0.1033	0.0133	0.1166		1,173.2144	1,173.2144	0.0353	0.1700	1,224.7662
Worker	0.3914	0.2521	3.0183	9.0500e-003	1.0844	5.8300e-003	1.0902	0.2876	5.3700e-003	0.2930		926.6668	926.6668	0.0280	0.0261	935.1464
<b>Total</b>	<b>0.4530</b>	<b>2.6197</b>	<b>3.8618</b>	<b>0.0199</b>	<b>1.4433</b>	<b>0.0197</b>	<b>1.4630</b>	<b>0.3910</b>	<b>0.0187</b>	<b>0.4096</b>		<b>2,099.8813</b>	<b>2,099.8813</b>	<b>0.0633</b>	<b>0.1961</b>	<b>2,159.9126</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 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	18.5690					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
<b>Total</b>	<b>18.7607</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0771	0.0497	0.5945	1.7800e-003	0.2136	1.1500e-003	0.2147	0.0567	1.0600e-003	0.0577		182.5253	182.5253	5.5100e-003	5.1400e-003	184.1955
<b>Total</b>	<b>0.0771</b>	<b>0.0497</b>	<b>0.5945</b>	<b>1.7800e-003</b>	<b>0.2136</b>	<b>1.1500e-003</b>	<b>0.2147</b>	<b>0.0567</b>	<b>1.0600e-003</b>	<b>0.0577</b>		<b>182.5253</b>	<b>182.5253</b>	<b>5.5100e-003</b>	<b>5.1400e-003</b>	<b>184.1955</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Architectural Coating - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.5690					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
<b>Total</b>	<b>18.7607</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0771	0.0497	0.5945	1.7800e-003	0.2136	1.1500e-003	0.2147	0.0567	1.0600e-003	0.0577		182.5253	182.5253	5.5100e-003	5.1400e-003	184.1955
<b>Total</b>	<b>0.0771</b>	<b>0.0497</b>	<b>0.5945</b>	<b>1.7800e-003</b>	<b>0.2136</b>	<b>1.1500e-003</b>	<b>0.2147</b>	<b>0.0567</b>	<b>1.0600e-003</b>	<b>0.0577</b>		<b>182.5253</b>	<b>182.5253</b>	<b>5.5100e-003</b>	<b>5.1400e-003</b>	<b>184.1955</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3097</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
<b>Total</b>	<b>0.0445</b>	<b>0.0287</b>	<b>0.3430</b>	<b>1.0300e-003</b>	<b>0.1232</b>	<b>6.6000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.1000e-004</b>	<b>0.0333</b>		<b>105.3031</b>	<b>105.3031</b>	<b>3.1800e-003</b>	<b>2.9700e-003</b>	<b>106.2666</b>



7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Paving - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3097</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.584 1</b>	<b>2,207.584 1</b>	<b>0.7140</b>		<b>2,225.433 6</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
<b>Total</b>	<b>0.0445</b>	<b>0.0287</b>	<b>0.3430</b>	<b>1.0300e-003</b>	<b>0.1232</b>	<b>6.6000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.1000e-004</b>	<b>0.0333</b>		<b>105.3031</b>	<b>105.3031</b>	<b>3.1800e-003</b>	<b>2.9700e-003</b>	<b>106.2666</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	2.3739	2.1095	17.5993	0.0293	3.0250	0.0251	3.0501	0.8058	0.0234	0.8292		3,014.983 3	3,014.983 3	0.2976	0.1731	3,074.016 5
Unmitigated	2.3739	2.1095	17.5993	0.0293	3.0250	0.0251	3.0501	0.8058	0.0234	0.8292		3,014.983 3	3,014.983 3	0.2976	0.1731	3,074.016 5

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	838.00	190.23	5.87	793,337	793,337
Industrial Park	210.90	159.03	77.67	239,124	239,124
Other Asphalt Surfaces	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	71.03	71.03	71.03	102,538	102,538
<b>Total</b>	<b>1,119.93</b>	<b>420.29</b>	<b>154.57</b>	<b>1,134,998</b>	<b>1,134,998</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	4.25	4.25	4.25	33.00	48.00	19.00	77	19	4
Industrial Park	4.25	4.25	4.25	59.00	28.00	13.00	79	19	2

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	4.25	4.25	4.25	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Industrial Park	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unenclosed Parking with Elevator	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Unrefrigerated Warehouse-No Rail	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Percent of Electricity Use Generated with Renewable Energy

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive 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					
Natural Gas Mitigated	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681
Natural Gas Unmitigated	0.0424	0.3856	0.3239	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.7184	462.7184	8.8700e-003	8.4800e-003	465.4681

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

	Natural Gas 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					
General Office Building	2299.33	0.0248	0.2254	0.1894	1.3500e-003		0.0171	0.0171		0.0171	0.0171		270.5099	270.5099	5.1800e-003	4.9600e-003	272.1174
Industrial Park	1444.9	0.0156	0.1417	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108		169.9887	169.9887	3.2600e-003	3.1200e-003	170.9988
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	188.868	2.0400e-003	0.0185	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2198	22.2198	4.3000e-004	4.1000e-004	22.3519
<b>Total</b>		<b>0.0424</b>	<b>0.3856</b>	<b>0.3239</b>	<b>2.3100e-003</b>		<b>0.0293</b>	<b>0.0293</b>		<b>0.0293</b>	<b>0.0293</b>		<b>462.7184</b>	<b>462.7184</b>	<b>8.8700e-003</b>	<b>8.4900e-003</b>	<b>465.4681</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas 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					
General Office Building	2.29933	0.0248	0.2254	0.1894	1.3500e-003		0.0171	0.0171		0.0171	0.0171		270.5099	270.5099	5.1800e-003	4.9600e-003	272.1174
Industrial Park	1.4449	0.0156	0.1417	0.1190	8.5000e-004		0.0108	0.0108		0.0108	0.0108		169.9887	169.9887	3.2600e-003	3.1200e-003	170.9988
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.188868	2.0400e-003	0.0185	0.0156	1.1000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003		22.2198	22.2198	4.3000e-004	4.1000e-004	22.3519
<b>Total</b>		<b>0.0424</b>	<b>0.3856</b>	<b>0.3239</b>	<b>2.3100e-003</b>		<b>0.0293</b>	<b>0.0293</b>		<b>0.0293</b>	<b>0.0293</b>		<b>462.7184</b>	<b>462.7184</b>	<b>8.8700e-003</b>	<b>8.4900e-003</b>	<b>465.4681</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

	ROG	NOx	CO	SO2	Fugitive 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	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
Unmitigated	2.7642	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788

**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	0.3307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4303					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
<b>Total</b>	<b>2.7642</b>	<b>3.1000e-004</b>	<b>0.0345</b>	<b>0.0000</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>0.0740</b>	<b>0.0740</b>	<b>1.9000e-004</b>		<b>0.0788</b>

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4303					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2000e-003	3.1000e-004	0.0345	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0740	0.0740	1.9000e-004		0.0788
<b>Total</b>	<b>2.7642</b>	<b>3.1000e-004</b>	<b>0.0345</b>	<b>0.0000</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>1.2000e-004</b>	<b>1.2000e-004</b>		<b>0.0740</b>	<b>0.0740</b>	<b>1.9000e-004</b>		<b>0.0788</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

7663 Carlsbad M&O Facility - San Diego County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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## ATTACHMENT 2

### CAP Consistency Checklist

# CLIMATE ACTION PLAN CONSISTENCY CHECKLIST P-30



## PURPOSE

In September 2015, the City of Carlsbad adopted a Climate Action Plan (CAP) that outlines actions that the city will undertake to achieve its proportional share of state greenhouse gas (GHG) emissions reductions. This checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the Climate Action Plan (CAP) are achieved. Implementation of these measures will ensure that new development is consistent with the CAP's assumption for relevant CAP strategies toward achieving the identified greenhouse gas (GHG) reduction targets. In this manner, a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP, in accordance with CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b).\*

\*City staff are currently not assessing the greenhouse gas impacts of California Environmental Quality Act projects by using the Climate Action Plan as a qualified GHG reduction plan under CEQA section 15183.5(b). Please consult with the Planning Department for further guidance. Additional information may be found on the Climate Action Plan Update and Vehicle Miles Traveled calculations [staff report](#).

This checklist is intended to assist project applicants in identifying CAP ordinance requirements and demonstrate how their project fulfills those requirements. This checklist is to be completed and included in applications for new development projects that are subject to discretionary review or require a building permit.

## APPLICATION SUBMITTAL REQUIREMENTS

- The completed checklist must be included in the project submittal package or building permit application. Application submittal procedures can be found on the City of Carlsbad [website](#). This checklist is designed to assist the applicant in identifying the minimum CAP-related requirements specific to their project. However, it may be necessary to supplement the completed checklist with supporting materials, calculations or certifications, to demonstrate full compliance with CAP requirements. For example, projects that propose or require a performance approach to comply with energy-related measures will need to attach to this checklist separate calculations and documentation as specified by the ordinances.
- If an item in the checklist is deemed to be not applicable to a project, or is less than the minimum required by ordinance, an explanation must be provided to the satisfaction of the Planning Division or building official.
- The requirements in the checklist will be included in the project's conditions of approval or issuance of building permit.
- Details on CAP ordinance requirements are available on the city's [website](#).

# City of Carlsbad Climate Action Plan Consistency Checklist

## STEP 1: LAND USE CONSISTENCY

The first step in determining CAP consistency for discretionary development is to assess the project’s consistency with the growth projections used in the development of the CAP. This section allows the city to determine a project’s consistency with the land use assumptions used in the CAP. Projects found not to be consistent with the CAP’s land use assumptions and that are projected to emit at or above the CAP screening threshold of 900 metric tons of CO<sub>2</sub> equivalent (MTCO<sub>2e</sub>) GHG will be subject to a project-specific analysis of GHG emissions’ impact on the environment in accordance with the requirements of the California Environmental Quality Act (CEQA). This may result in GHG-reducing mitigation measures applied as a condition of project approval in addition to compliance with the CAP ordinance requirements identified in Step 2 of this checklist.

STEP 1	Land Use Consistency	
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Checklist Item (Check the appropriate box and provide an explanation and supporting documentation for your answer)	Yes	No
<p>A. Is the proposed project consistent with the existing General Plan land use and specific/master plan or zoning designations?</p> <p style="padding-left: 20px;">OR,</p> <p>If the proposed project is not consistent with the existing land use plan and zoning designations, does the project include a land use plan and/or specific plan, master plan or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?</p>	<input type="checkbox"/>	<input type="checkbox"/>

If “**Yes**”, proceed to [Step 2](#) of the checklist. For the second option under Question A above, provide estimated project-related GHG emissions under both existing and proposed designation(s) for comparison. GHG emissions must be estimated in accordance with the City of Carlsbad [Guidance to Demonstrating Consistency with the Climate Action Plan](#).

If “**No**”, proceed to Question B.

<p>B. The CAP established a screening threshold of 900 MTCO<sub>2e</sub>/year for new development projects to assist in determining consistency with the CAP. The types and sizes of typical projects listed below have been determined to correspond to the CAP screening threshold. Will the proposed <u>land use change</u> result in the construction of less than any one of the following?</p> <ul style="list-style-type: none"> <li>• <u>Single-Family Housing</u>: 50 dwelling units</li> <li>• <u>Multi-Family Housing</u>: 70 dwelling units</li> <li>• <u>Office</u>: 35,000 square feet</li> <li>• <u>Retail Store</u>: 11,000 square feet</li> <li>• <u>Grocery Store</u>: 6,300 square feet</li> <li>• <u>Other</u>: If the proposed project is not one of the above types, provide a project-specific GHG emissions analysis to determine whether it is below the 900 MTCO<sub>2e</sub>/year screening threshold.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
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If “**Yes**”, proceed to [Step 2](#) of the checklist.

If “**No**”, the project’s GHG impact is potentially significant and must be analyzed in accordance with CEQA. Applicant must prepare a Self-developed GHG emissions reduction program in accordance with the City of Carlsbad [Guidance to Demonstrating Consistency with the Climate Action Plan](#) to demonstrate how it would offset the increase in emissions over the existing designations. The project must incorporate each of the applicable measures identified in [Step 2](#) to mitigate cumulative GHG emissions impacts unless the decision maker finds that a measure is infeasible in accordance with California Environmental Quality Act Guidelines Section 15091. Mitigation in lieu of or in addition to the measures in [Step 2](#) may be required, depending on the results of the project-specific GHG impact analysis. Proceed and complete a project-specific Self-developed GHG emissions reduction program and [Step 2](#) of the Checklist.

City of Carlsbad Climate Action Plan Consistency Checklist

**STEP 2: CAP ORDINANCE COMPLIANCE REQUIREMENTS**

Completion of this checklist will document a project’s compliance with CAP ordinances, and in turn, demonstrate consistency with the applicable measures and actions of the CAP. The compliance requirements in this Step 2 apply to development projects that require a building permit. All other development projects shall implement all emissions-related mitigation measures from the [General Plan Update EIR](#).

**Application Information**

Project No./Name: \_\_\_\_\_

Property Address/APN: \_\_\_\_\_

Applicant Name/Co.: \_\_\_\_\_

Applicant Address: \_\_\_\_\_

Contact Phone: \_\_\_\_\_ Contact Email: \_\_\_\_\_

Contact information of person completing this checklist (if different than above):

Name: \_\_\_\_\_ Contact Phone: \_\_\_\_\_

Company name/address: \_\_\_\_\_ Contact Email: \_\_\_\_\_

Use the table below to determine which sections of the Ordinance Compliance checklist are applicable to your project. If your project includes alterations or additions to an existing building, please contact the Carlsbad Building Division for assistance in estimating building permit valuation, by phone at 760-602-2719 or by email at [building@carlsbadca.gov](mailto:building@carlsbadca.gov).

Estimated Building Permit Valuation (BPV): \$ \_\_\_\_\_

Construction Type	Complete Section(s)	Notes:
<input type="checkbox"/> Residential		
<input type="checkbox"/> New construction	2A, 3A and 4A	
<input type="checkbox"/> Alterations:		
<input type="checkbox"/> BPV < \$60,000	N/A	All residential alterations
<input type="checkbox"/> BPV ≥ \$60,000	1A and 4A	1-2 family dwellings and townhouses with attached garages only
<input type="checkbox"/> Electrical service panel upgrade	4A	
<input type="checkbox"/> BPV ≥ \$200,000	1A and 4A	Multi-family dwellings only where interior finishes are removed and significant site work and upgrades to structural and mechanical, electrical, and/or plumbing systems are proposed
<input type="checkbox"/> Nonresidential		
<input type="checkbox"/> New construction	1B, 2B, 3B, 4B and 5	
<input type="checkbox"/> Alterations:		

City of Carlsbad Climate Action Plan Consistency Checklist

<input type="checkbox"/> BPV ≥ \$200,000 or additions ≥ 1,000 square feet	1B, 5	
<input type="checkbox"/> BPV ≥ \$1,000,000	1B, 2B and 5	Building alterations of ≥ 75% existing gross floor area
<input type="checkbox"/> ≥ 2,000 sq. ft. new roof addition	2B and 5	1B also applies if BPV ≥ \$200,000

**CAP Ordinance Compliance**

**Checklist Item**  
Check the appropriate boxes, explain all not applicable and exception items, and provide supporting calculations and documentation as necessary.

**1. Energy Efficiency**

Please refer to Carlsbad Ordinance No. CS-347 and the California Green Building Standards Code (CALGreen) for more information when completing this section.

A.  Residential addition or alteration ≥ \$60,000 building permit valuation. See Ord. CS-347, Section 8.  N/A \_\_\_\_\_  
 Exception: Home energy score ≥ 7 (attach certification)

Year Built	Single-family Requirements	Multi-family Requirements
<input type="checkbox"/> Before 1978	Select one: <input type="checkbox"/> Duct sealing <input type="checkbox"/> Attic insulation <input type="checkbox"/> Cool roof	<input type="checkbox"/> Attic insulation
<input type="checkbox"/> 1978 and later	Select one: <input type="checkbox"/> Lighting package <input type="checkbox"/> Water heating package	
<input type="checkbox"/> Between 1978 and 1990		Select one: <input type="checkbox"/> Attic insulation <input type="checkbox"/> Duct Sealing <input type="checkbox"/> Cool roof
<input type="checkbox"/> 1991 and later		Select one: <input type="checkbox"/> Lighting package <input type="checkbox"/> Water heating package

B.  Nonresidential\* new construction or alterations ≥ \$200,000 building permit valuation, or additions ≥ 1,000 square feet. See CALGreen Appendix A5, Discussion A5.2, as amended in CS-347, Section 3.  N/A \_\_\_\_\_

A5.203.1.1.1  
 Outdoor lighting: .90 Allowed Outdoor Lighting Power  N/A \_\_\_\_\_

A5.203.1.1.2  
 Restaurant service water heating (comply with California Energy Code Section 140.5, as amended)  N/A \_\_\_\_\_

A5.203.1.2.1  
Choose one as applicable:       .95 Energy budget       .90 Energy budget  N/A \_\_\_\_\_

A5.211.1.\*\*  
 On-site renewable energy  N/A \_\_\_\_\_

A5.211.3\*\*  
 Green power (if offered by local utility provider, 50% minimum renewable sources)  N/A \_\_\_\_\_

A5.212.1  
 Elevators and escalators  N/A \_\_\_\_\_

A5.213.1  
 Steel framing

# City of Carlsbad Climate Action Plan Consistency Checklist

N/A \_\_\_\_\_

\* Includes hotels/motels and high-rise residential buildings

\*\* For alterations  $\geq$  \$1,000,000 BPV and affecting > 75% existing gross floor area, or alterations that add 2,000 square feet of new roof addition: comply with California Energy Code section 120.10 instead.

## 2. Photovoltaic Systems

- A.  Residential new construction (for building permit applications submitted after 1/1/20). Refer to 2019 California Energy Code section 150.1(c) 14 for requirements. Note: if project includes installation of an electric heat pump water heater pursuant to Carlsbad ordinance CS-348, increase system size by .3kWdc if PV offset option is selected.

Floor Plan ID (use additional sheets if necessary)	CFA	#d.u.	Calculated kWdc*	Exception
				<input type="checkbox"/> _____
				<input type="checkbox"/> _____
				<input type="checkbox"/> _____
				<input type="checkbox"/> _____
Total System Size:			_____ kWdc	

$$\text{kWdc} = (\text{CFA} \times .572) / 1,000 + (1.15 \times \text{\#d.u.})$$

\*Formula calculation where CFA = conditional floor area, #du = number of dwellings per plan type  
If proposed system size is less than calculated size, please explain.

- B.  Nonresidential new construction or alterations  $\geq$ \$1,000,000 BPV and affecting  $\geq$ 75% existing floor area, or addition that increases roof area by  $\geq$ 2,000 square feet. Please refer to Carlsbad Ordinance CS-347, Section 6 when completing this section.

Choose one of the following methods:

**Gross Floor Area (GFA) Method**

GFA: \_\_\_\_\_ Min. System Size: \_\_\_\_\_ kWdc

If < 10,000s.f. Enter: 5 kWdc

If  $\geq$  10,000s.f. calculate: 15 kWdc x (GFA/10,000) \*\*

\*\*Round building size factor to nearest tenth, and round system size to nearest whole number.

**Time- Dependent Valuation Method**

Annual TDV Energy use:\*\*\* \_\_\_\_\_ x .80= Min. system size: \_\_\_\_\_ kWdc

\*\*\*Attach calculation documentation using modeling software approved by the California Energy Commission.

**3. Water Heating**

**A.  Residential and hotel/motel new construction**

**Please refer to Carlsbad Ordinance CS-347 and CS-348 when completing this section.**

For systems serving **individual dwelling units** choose one:

- Heat pump water heater AND compact hot water distribution AND drain water heat recovery (low-rise residential only)
- Heat pump water heater AND PV system .3 kWdc larger than required in CA Energy Code Section 120.10 (for high rise residential hotel/motel) or 150.1(c) 14 (for low-rise residential)
- Heat pump water heater meeting Tier 3 or higher NEEA Advanced Water Heating Specification
- Solar water heating system that is either .60 solar savings fraction or 40 s.f. solar collectors

Exception: \_\_\_\_\_

For systems serving **multiple dwelling** units, install a central water-heating system with all of the following:

- Gas or propane water heating system
- Recirculation system per CS-347 (high-rise residential, hotel/motel) or CS-348 (low-rise residential)
- Solar water heating system that is either:
  - .60 solar savings fraction or 40 s.f. solar collectors
  - .40 solar savings fraction, plus drain water heat recovery

Exception: \_\_\_\_\_

**B.  Nonresidential new construction**

**Please refer to Carlsbad Ordinance CS-347 when completing this section.**

Water heating system derives at least 40% of its energy from one of the following (attach documentation):

- Solar-thermal
- Photovoltaics
- Recovered energy

Water heating system is (choose one):

- Heat pump water heater
- Electric resistance water heater(s)
- Solar water heating system with .40 solar savings fraction

Exception: \_\_\_\_\_

**4. Electric Vehicle Charging**

**A.  Residential New construction and major alterations\***

**Please refer to Carlsbad Ordinance CS-349 when completing this section.**

One and two-family residential dwelling or townhouse with attached garage:

- One EVSE ready parking space required
- Exception : \_\_\_\_\_

Multi-family residential:  Exception : \_\_\_\_\_

Total Parking Spaces Proposed	EVSE Spaces			
	Capable	Ready	Installed	Total

Calculations: Total EVSE spaces = .10 x Total parking (rounded up to nearest whole number)  
 EVSE Installed = Total EVSE Spaces x .50 (rounded up to nearest whole number)  
 EVSE other= Total EVSE spaces – EVSE Installed  
 (EVSE other may be “Capable,” “Ready” or “Installed.”)

# City of Carlsbad Climate Action Plan Consistency Checklist

\*Major alterations are: (1) for one and two-family dwellings and townhouses with attached garages, alterations have a building permit valuation ≥ \$60,000 or include an electrical service panel upgrade; (2) for multifamily dwellings (three units or more without attached garages), alterations have a building permit valuation ≥ \$200,000, interior finishes are removed and significant site work and upgrades to structural and mechanical, electrical, and/or plumbing systems are proposed.

B.  **Nonresidential new construction (includes hotels/motels)**  Exception : \_\_\_\_\_

Total Parking Spaces Proposed	EVSE Spaces			
	Capable	Ready	Installed	Total

Calculation: Refer to the table below:

Total Number of Parking Spaces provided	Number of required EV Spaces	Number of required EVSE Installed Spaces
<input type="checkbox"/> 0-9	1	1
<input type="checkbox"/> 10-25	2	1
<input type="checkbox"/> 26-50	4	2
<input type="checkbox"/> 51-75	6	3
<input type="checkbox"/> 76-100	9	5
<input type="checkbox"/> 101-150	12	6
<input type="checkbox"/> 151-200	17	9
<input type="checkbox"/> 201 and over	10 percent of total	50 percent of Required EV Spaces

**5.  Transportation Demand Management (TDM)**

- A. List each proposed nonresidential use and gross floor area (GFA) allocated to each use.
- B. Employee ADT/1,000 square feet is selected from the City of Carlsbad Employee ADT Table.

Use	GFA	Employee ADT/1,000 S.F.	Total Employee ADT
Total			_____

If total employee ADT is greater than or equal to 110 employee ADT, a TDM plan is required.

**\*NOTE:** Notwithstanding the 110 employee ADT threshold above, General Plan Mobility Element Policy 3-P.11 requires new development that adds vehicle traffic to vehicle LOS-exempt street facilities to implement TDM and transportation system management strategies. Please consult with City of Carlsbad Land Development Engineering (LDE) staff to determine whether this policy applies to your project.

TDM plan required: Yes  No

LDE Staff Verification:  \_\_\_\_\_ (staff initials)