

# ***CBX OTN PARKING LOT***

## **AIR QUALITY STUDY**

### **Prepared for:**

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### **Prepared by:**



November 2021

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PTS 615398

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**November 2021**

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# CBX OTN PARKING LOT PROJECT City of San Diego, California

## AIR QUALITY STUDY

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## EXECUTIVE SUMMARY

This report is an analysis of the potential air quality impacts associated with the proposed CBX OTN Parking Lot project and the associated widening of Siempore Viva Road along the project's street frontage. The CBX OTN Parking Lot project involves construction of a new surface parking lot with access from Siempore Viva Road. The project is located south of Siempore Viva Road between La Media Road to the east and Britannia Road to the west. The project would construct 1,918 standard parking spaces, 31 ADA spaces and 6 ADA van spaces (1,955 total spaces). Improvements (widening) to Siempore Viva Road would also be required. The project site is vacant and 28.9 acres in size. The disturbed area, including 1.18 acres within the Siempore Viva Road right-of-way, would be 17.6 acres. Post construction, 15.6 acres would be impervious; 3.3 would be pervious. Various on-site improvements are proposed to meet stormwater and access requirements. The project site is zoned Industrial Business & Trade (IBT)-1-1.

The report has been prepared by Birdseye Planning Group under contract to the applicant, Otay Tijuana Venture, LLC, at the request of the City of San Diego to support the discretionary review process. This study analyzes the potential for temporary air quality impacts associated with construction and long-term air quality impacts associated with operation of the proposed project.

Air quality modeling was performed in general accordance with the methodologies outlined in the SDAPCD 2016 RAQS to identify both construction and operational emissions associated with the proposed project. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 which incorporates current air emission data, planning methods and protocol approved by CARB.

Construction of the proposed project would not exceed the San Diego Air Pollution Control District (SDAPCD) regional construction emission thresholds for daily emissions. Operational emissions include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment and evaporative emissions as the lot is painted/restriped over the life of the project. The majority of operational emissions are associated with vehicle trips to and from the project site. The net change in emissions between what currently operates on the site versus the proposed project would not exceed the SDAPCD thresholds for the criteria pollutants evaluated.

The proposed project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. The project would be a commercial parking lot. It would not include industrial or agricultural uses typically associated with objectionable odors. Therefore, impacts associated with objectionable odors would be less than significant.

Although CO is not a regional air quality concern in SDAB, elevated CO levels can occur at or near intersections that experience severe traffic congestion. Screening for possible elevated CO levels is recommended for severely congested intersections experiencing levels of service E or F with project traffic where a significant project traffic impact may occur. The trip generation memorandum (November 2021) prepared for the project determined that no significant direct or cumulative project impacts to study area intersections or roadway segments would occur under existing or near-term cumulative conditions. Receptors would not be exposed to substantial pollutant concentrations.

As noted, the RAQS relies on information from CARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. Projects that propose development that is consistent with the growth anticipated by the general plan is consistent with the State Implementation Plan, Air Quality Management Plan and Regional Air Quality Strategy. The project was determined to be consistent with the SIP, AQMP and RAQS and significance threshold. Impacts related to this threshold would be less than significant.

# **CBX OTN Parking Lot San Diego, California**

## **AIR QUALITY STUDY**

### **PROJECT DESCRIPTION**

The OTN Parking Lot project involves construction of a new surface parking lot with access from Siempre Viva Road. The 28.9-acre project is located south of Siempre Viva Road between La Media Road to the east and Britannia Road to the west. The project would construct 1,918 standard parking spaces, 31 ADA spaces and 6 ADA van spaces. Access improvements to Siempre Viva Road would also be required. The disturbed area, including 1.18 acres within the Siempre Viva Road right-of-way, would be 17.6 acres. Post construction, 15.6 acres would be impervious; 3.3 would be pervious. Various on-site improvements are proposed to meet stormwater and access requirements. The project site is vacant and is generally surrounded by vacant land and light industrial development. Figure 1 provides a vicinity map of the project site. Figure 2 provides a project site plan.

It is anticipated that the proposed project would begin construction in mid- 2022 and be completed by late 2022.

### **REGULATORY SETTING**

Air pollutants are regulated at the national, State, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (USEPA) regulates at the national level; the California Air Resources Control Board (CARB) regulates at the State level; and the San Diego Air Pollution Control District (SDAPCD) regulates air quality in San Diego County.

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer national air quality regulations, while CARB is the state equivalent in the California Environmental Protection Agency. Local control over air quality management is provided by CARB through multi-county and county-level Air Pollution Control Districts (APCDs) (also referred to as Air Quality Management Districts). CARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide. The City of San Diego is located in the San Diego Air Basin (SDAB), which is under the jurisdiction of the SDAPCD.





Figure 1—Project Site



**OTN PARKING LOT**  
 CONDITIONAL USE PERMIT NO. XXXXXX  
 SITE DEVELOPMENT PERMIT NO.  
 XXXXXXXX CITY OF SAN DIEGO - PTS NO.  
 XXXXXX

**SCOPE OF WORK:**

CLIP PERMIT FOR THE ADDITION OF A SURFACE PARKING LOT WITH ACCESS FROM SIEMPRE VIVA ROAD ON VACANT LAND SOUTH OF SIEMPRE VIVA ROAD. THIS INCLUDES POSSIBLE IMPROVEMENTS TO SIEMPRE VIVA ROAD. IN ADDITION, AN SDP CONVERSION OF AN EXISTING DRAINAGE CHANNEL FROM C&P INTO AN UNDERGROUND CULVERT. LANDSCAPING IS TO BE INCLUDED THROUGHOUT THE SITE.

**LEGAL DESCRIPTION:**

A PORTION OF LOT 2 OF FRACTIONAL SECTION 3, TOWNSHIP 18 SOUTH, RANGE 1 WEST, SAND BROWNING MESSIAH IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF PER R.O.S. 8105.

**ASSESSOR'S PARCEL NO.**

007-08-0-11-06, 007-08-0-12-00

**OWNER:**

OTAY-TIJANA VENTURE, LLC  
 2745 OTAY PACIFIC DRIVE  
 SAN DIEGO, CA 92154

**ZONING:**

PT-1-1

**LAND USE:**

EXISTING: VACANT  
 PROPOSED: PARKING LOT

**GEOLOGICAL HAZARD:**

GEOLOGICAL HAZARD CATEGORY 53

**LANDSCAPE AREA:**

PROPOSED LANDSCAPE AREA: 134,100 SQ. FT.

**PARKING CALCULATIONS**

PARKING SUMMARY TABLE		
TOTAL PARKING	REQUIRED STALLS	PROVIDED STALLS
TOTAL ADA PARKING	N/A	5,310
(INCLUDING VAN)	30	31
ADA VAN PARKING	0	0

NOTE: ACCESSIBLE PARKING SPACES CALCULATED PER CITY OF SAN DIEGO STANDARD DRAWING SDM-117.

MINIMUM REQUIRED PARKING RATIO FOR ACCESSIBLE PARKING SPACES:

- 1,001 AND OVER: 20 STALLS, PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1,000.
- AT LEAST ONE VAN PARKING SPACE IS REQUIRED FOR EVERY 6 OR FRACTION OF SIX PARKING SPACES.

**TRANSIT STOPS:**

NONE

**MAPPING NOTE:**

A FINAL MAP WILL BE FILED AT THE COUNTY RECORDERS OFFICE. A DETAILED PROCEDURE OF SURVEY WILL BE SHOWN ON THE FINAL MAP AND ALL LOT CORNERS WILL BE SET ON THE DOCUMENT.

**CUT/FILL SUMMARY:**

CUT: 19,000 CY  
 FILL: 19,000 CY  
 IMPORT: 0 CY

**DISTURBANCE SUMMARY:**

TOTAL AREA: 28.3 AC (PER R.O.S. 8105)  
 DISTURBED AREA: 17.1 AC  
 IMPERVIOUS: 14.3 AC  
 PERVIOUS: 3.2 AC

**SHEET INDEX:**

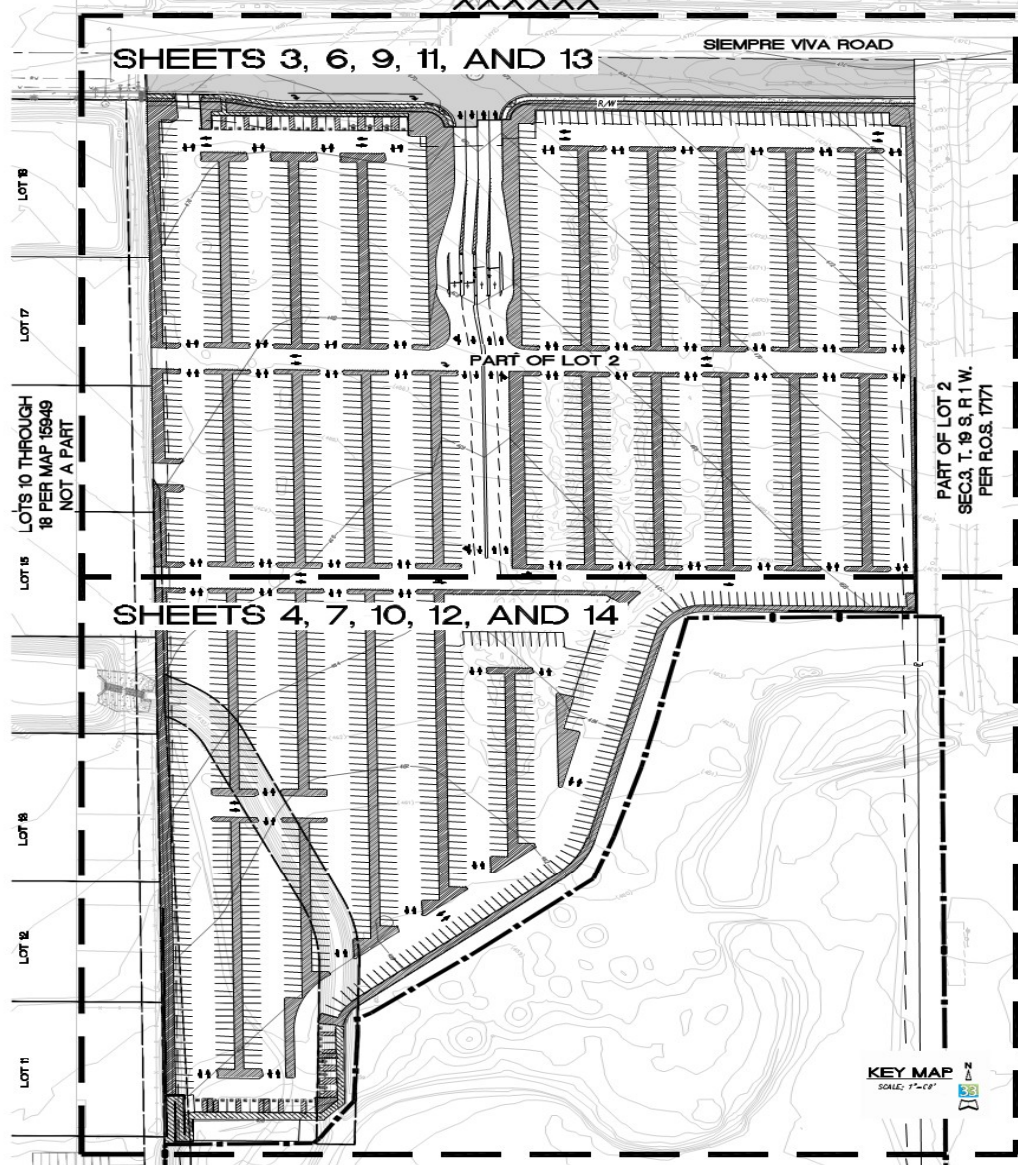
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**CERTIFICATION STATEMENT**

- I HEREBY ACKNOWLEDGE AND CERTIFY THAT:
  - I AM ACCOUNTABLE FOR KNOWING AND COMPLYING WITH THE GOVERNING POLICIES, REGULATIONS AND SUBMITTAL REQUIREMENTS APPLICABLE TO THIS PROPOSED DEVELOPMENT.
  - I HAVE PERFORMED REASONABLE RESEARCH TO DETERMINE THE REQUIRED APPROVALS AND DECISION PROCESS FOR THE PROPOSED PROJECT, AND THAT FAILURE TO ACCURATELY IDENTIFY AN APPROVAL OR DECISION PROCESS COULD SIGNIFICANTLY DELAY THE PERMITTING PROCESS.
  - I HAVE TAKEN THE PROFESSIONAL CERTIFICATION FOR DEVELOPMENT PERMIT COMPLETENESS REVIEW TRAINING AND AM ON THE APPROVED LIST FOR PROFESSIONAL CERTIFICATION.
  - MAINTAINING MY PROFESSIONAL CERTIFICATION FOR DEVELOPMENT PERMIT COMPLETENESS REVIEW PRIVILEGE REQUIRES ACCURATE SUBMITTALS ON A CONSISTENT BASIS.
  - SUBMITTING INCOMPLETE DOCUMENTS AND PLANS ON A CONSISTENT BASIS MAY RESULT IN THE REVOCATION OF MY PROFESSIONAL CERTIFICATION FOR DEVELOPMENT PERMIT COMPLETENESS REVIEW.
  - IF REQUIRED DOCUMENTS OR PLAN CONTENT IS MISSING, PROJECT REVIEW WILL BE DELAYED AND
  - THIS SUBMITTAL PACKAGE MEETS ALL OF THE MINIMUM SUBMITTAL REQUIREMENTS CONTAINED IN LAND DEVELOPMENT MANUAL, VOLUME 1, CHAPTER 1, SECTION 4.

DENSE: VO

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_





## **California Air Resources Board**

CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (CCAA), meeting state requirements of the federal Clean Air Act and establishing California Ambient Air Quality Standards (CAAQSs). It is also responsible for setting emission standards for vehicles sold in California and for other emission sources such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications and oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level. Both state and federal standards are summarized in Table 1. The federal "primary" standards have been established to protect the public health. The federal "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

## **San Diego Air Pollution Control District**

The SDAPCD was created to protect the public from the harmful effects of air pollution, achieve and maintain air quality standards, foster community involvement and develop and implement cost-effective programs that meet state and federal mandates while considering environmental and economic impacts.

Specifically, the SDAPCD is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs developed include air quality rules and regulations that regulate stationary source emissions, including area sources, point sources, and certain mobile source emissions. The SDAPCD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified or relocated stationary sources do not create net emissions increases; and thus, are consistent with the region's air quality goals. The SDAPCD provides significance thresholds in Regulation II, Rule 20.2, Table 20-2-1. "AQIA Trigger Levels." These trigger levels were established for stationary sources of air pollution and are commonly used for environmental evaluations. The SDAPCD enforces air quality rules and regulations through a variety of means, including inspections, educational or training programs, or fines, when necessary.

**Table 1**  
**Current Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 µg/m <sup>3</sup>	0.070 µg/m <sup>3</sup>
PM <sub>10</sub>	24-Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
	Annual	---	20 µg/m <sup>3</sup>
PM <sub>2.5</sub>	24-Hour	35 µg/m <sup>3</sup>	---
	Annual	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	24-Hour	---	0.04 ppm
	3-Hour	0.5 ppm (secondary)	---
	1-Hour	0.075 ppm (primary)	0.25 ppm
Lead	30-Day Average	---	1.5 µg/m <sup>3</sup>
	3-Month Average	0.15 µg/m <sup>3</sup>	---

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

Source: California Air Resources Board, <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf> May 4, 2016.

### State Implementation Plan/Air Quality Management Plan/Regional Air Quality Strategy

The federal Clean Air Act Amendments (CAAA) mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. SIPs are comprehensive plans that describe how an area will attain national and state ambient air quality standards. SIPs are a compilation of new and previously submitted plans, programs (i.e., monitoring, modeling and permitting programs), district rules, state regulations and federal controls and include pollution control measures that demonstrate how the standards will be met through those measures.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the USEPA for approval and publication in the Federal Register. Thus, the Regional Air Quality Strategy (RAQS) and Air Quality Management Plan (AQMP) prepared by SDAPCD and referenced herein become part of the SIP as the material relates to efforts ongoing in San Diego to achieve the national and state ambient air quality standards. The most recent SIP element for San Diego County was submitted in December 2016. The

document identifies control measures and associated emission reductions necessary to demonstrate attainment of the 2008 Federal 8-hour ozone standard by July 20, 2018.

The San Diego RAQS was developed pursuant to California Clean Air Act (CCAA) requirements. The RAQS was initially adopted in 1991 and was updated in 1995, 1998, 2001, 2004, 2009 and 2016. The RAQS can be found at the following: <http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf>. The RAQS identifies feasible emission control measures to provide progress in San Diego County toward attaining the State ozone standard. The pollutants addressed in the RAQS are volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>), precursors to the photochemical formation of ozone (the primary component of smog). The RAQS was initially adopted by the San Diego County Air Pollution Control Board on June 30, 1992, and amended on March 2, 1993, in response to ARB comments. At present, no attainment plan for particulate matter less than 10 microns in diameter (PM<sub>10</sub>) or particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) is required by the state regulations; however, SDAPCD has adopted measures to reduce particulate matter in San Diego County. These measures range from regulation against open burning to incentive programs that introduce cleaner technology. These measures can be found in a report titled "*Measures to Reduce Particulate Matter in San Diego County*" December 2005 and can be found at: <http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/PM-Measures.pdf>.

The RAQS relies on information from CARB and San Diego Association of Governments (SANDAG), including mobile and area source emissions, as well as information regarding projected growth in the County, to estimate future emissions and then determine strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends as well as land use plans developed by the cities and the County as part of the development of the individual General Plans. As such, projects that propose development consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the General Plan and SANDAG's growth projections, the project might conflict with the RAQS and SIP; and thus, have a potentially significant impact on air quality.

Under state law, the SDAPCD is required to prepare an AQMP for pollutants for which the SDAB is designated non-attainment. Each iteration of the SDAPCD's AQMP is an update of the previous plan and has a 20-year horizon. Currently the SDAPCD has implemented a 2012 8-hour National Ozone Implementation/Maintenance Plan, a 2007 8-hour Ozone Plan, and a 2004 Carbon Monoxide Plan. The SDAPCD adopted the 2008 8-hour Ozone Attainment Plan for San Diego County on December 16, 2016. CARB adopted the ozone plan as a revision to the California SIP on March 23, 2017. The ozone plan was submitted to the USEPA for review on April 12, 2017. Comments from the USEPA are pending. These plans are available for

download on the ARB website located at the following URL:  
<http://www.arb.ca.gov/planning/sip/planarea/sansip.htm>.

## ENVIRONMENTAL SETTING

### REGIONAL CLIMATE

The weather of San Diego County is profoundly influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average minimum temperature for January ranges from the mid-40s to the high-50s degrees Fahrenheit (4 to 15 degrees Celsius) across the county. July maximum temperatures average in the mid-80s to the high-90s degrees Fahrenheit (high-20s to the high-30s degrees Celsius). Most of the county's precipitation falls from November to April, with infrequent (approximately 10 percent) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches (254 millimeters); the amount increases with elevations as moist air is lifted over the mountains.

The interaction of ocean, land, and the Pacific High-Pressure Zone maintains clear skies for much of the year and drives the prevailing winds. Local terrain is often the dominant factor inland and winds in inland mountainous areas tend to blow upwards in the valleys during the day and down the hills and valleys at night.

In conjunction with the onshore/offshore wind patterns, there are two types of temperature inversions (reversals of the normal decrease of temperature with height), which occur within the region that affect atmospheric dispersive capability and that act to degrade local air quality. In the summer, an inversion at about 1,100 to 2,500 feet (335 to 765 meters) is formed over the entire coastal plain when the warm air mass over land is undercut by a shallow layer of cool marine air flowing onshore. The prevailing sunny days in this region further exacerbate the smog problem by inducing additional adverse photochemical reactions. During the winter, a nightly shallow inversion layer (usually at about 800 feet or 243 meters) forms between the cooled air at the ground and the warmer air above, which can trap vehicular pollutants. The days of highest Carbon Monoxide (CO) concentrations occur during the winter months.

The predominant onshore/offshore wind pattern is sometimes interrupted by so-called Santa Ana conditions, when high pressure over the Nevada-Utah region overcomes the prevailing westerly wind direction. This draws strong, steady, hot, and dry winds from the east over the mountains and out to sea. Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or breakdown of these conditions or if the Santa Ana is weak, prevailing northwesterly winds are reestablished which send polluted air from the Los Angeles basin ashore in the SDAB. "Smog transport from the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside counties) is a key factor on more than half the days San Diego exceeds clean air standards" (San Diego Air Pollution Control District, 2010).



## Pollutants

The SDAPCD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.” San Diego County is listed as a federal non-attainment area for ozone (eight hour) and a state non-attainment area for ozone (one hour and eight-hour standards), PM<sub>10</sub> and PM<sub>2.5</sub>. As shown in Table 2, the SDAB is in attainment for the state and federal standards for nitrogen dioxide, carbon monoxide, sulfur dioxide and lead. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG)<sup>1</sup>. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile exhaust. Elevated CO concentrations; therefore, are usually only found near areas of high traffic volumes operating in congested conditions. Carbon monoxide health effects are related to blood hemoglobin. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

**Table 2**  
**San Diego County Attainment Status**

Criteria Pollutant	Federal Designation	State Designation
Ozone (one hour)	Attainment*	Non-Attainment
Ozone (eight hour)	Non-Attainment	Non-Attainment
Carbon Monoxide	Attainment	Attainment
PM <sub>10</sub>	Unclassifiable**	Non-Attainment
PM <sub>2.5</sub>	Attainment	Non-Attainment

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<sup>1</sup> Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

**Table 2**  
**San Diego County Attainment Status**

Criteria Pollutant	Federal Designation	State Designation
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

\* The federal 1-hour standard of 12 ppm was in effect from 1979 through June 1, 2005. The revoked standard is referenced here because it was used for such a long period and because this benchmark is addressed in State Implementation Plans (SIPs).

\*\* At the time of designation, if the available data does not support a designation of attainment or non-attainment, the area is designated as unclassifiable.

Source: San Diego Air Pollution Control District. June 2016. <http://www.sandiegocounty.gov/content/sdc/apcd/en/air-quality-planning/attainment-status.html>

Nitrogen Dioxide. Nitrogen dioxide (NO<sub>2</sub>) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. Nitrogen dioxide is an acute irritant. A relationship between NO<sub>2</sub> and chronic pulmonary fibrosis may exist and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM<sub>10</sub> and acid rain.

Suspended Particulates. PM<sub>10</sub> is particulate matter measuring no more than 10 microns in diameter, while PM<sub>2.5</sub> is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM<sub>10</sub> and PM<sub>2.5</sub> are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates (PM<sub>2.5</sub>) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Sulfur Oxides. Sulfur oxides (SO<sub>x</sub>) are compounds of sulfur and oxygen molecules. Sulfur dioxide (SO<sub>2</sub>) is a gas predominantly found in the lower atmosphere. It is invisible and has an unpleasant smell. It reacts easily with other substances to form harmful compounds,

such as sulfuric acid, sulfurous acid and sulfate particles. The majority of the sulfur dioxide in air comes from human sources. The main source of sulfur dioxide in the air is industrial activity that processes materials containing sulfur such as the generation of electricity from coal, oil or gas. Some mineral ores also contain sulfur, and sulfur dioxide is released when they are processed. In addition, industrial activities that burn fossil fuels containing sulfur can be important sources of sulfur dioxide. Sulfur dioxide is also present in motor vehicle emissions, as the result of fuel combustion. In the past, motor vehicle exhaust was an important, but not the main, source of sulfur dioxide in air. This is no longer the case.

Sulfur dioxide affects human health when it is breathed in. It irritates the nose, throat, and airways to cause coughing, wheezing, shortness of breath, or a tight feeling around the chest. The effects of sulfur dioxide can be felt by most people within 10 or 15 minutes after breathing it in. Those most at risk of developing problems if they are exposed to sulfur dioxide are people with asthma or similar conditions.

Lead. Lead (Pb) is an elemental heavy metal found naturally in the environment as well as in manufactured products. Lead can be released directly into the air, as suspended particles. Historically, major sources of lead air emissions were motor vehicles and industrial sources. Motor-vehicle emissions have been reduced by the phasing out of leaded gasoline, but lead is still used in general-aviation gasoline. Lead that is emitted into the air can be inhaled or can be ingested, primarily through contact with contaminated soils or other surfaces.

Humans may be exposed to lead from air pollution directly, through inhalation, or through the incidental ingestion of lead that has settled out from the air onto soil or dust. Ingestion of lead settled onto surfaces is the main route of human exposure to lead originally released into the air. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood.

Toxic Air Contaminants/Diesel Particulate Matter. Hazardous air pollutants, also known as toxic air pollutants (TACs) or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples of toxic air pollutants include:

- benzene, which is found in gasoline;
- perchloroethylene, which is emitted from some dry-cleaning facilities; and
- methylene chloride, which is used as a solvent.

Transportation related emissions are focused on particulate matter constituents within diesel exhaust and TAC constituents that comprise a portion of total organic gas (TOG) emissions from both diesel and gasoline fueled vehicles. Diesel engine emissions are comprised of exhaust particulate matter and TOGs which are collectively defined for the purpose of a health risk assessment (HRA), as Diesel Particulate Matter (DPM). DPM and TOG emissions from both

diesel and gasoline fueled vehicles is typically composed of carbon particles and carcinogenic substances including polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and oxides of nitrogen (NO<sub>x</sub>).

## **SENSITIVE RECEPTORS**

Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to air pollutants. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children; the elderly; persons engaged in strenuous work or exercise and people with cardiovascular and chronic respiratory diseases. The nearest receptor is a single-family residence located adjacent to and east of the site. There are no schools, day care facilities or other sensitive receptors in the area. The sensitive receptor is shown in Figure 3.

### **Monitored Air Quality**

The SDAPCD monitors air quality conditions at locations throughout the SDAB. For this analysis, data from the Otay Mesa - Donovan Correctional Facility monitoring station northeast of the site were used to characterize existing ozone and PM<sub>2.5</sub> conditions in the vicinity of the project site. A summary of the data recorded at the Otay Mesa Donovan monitoring station from 2018 through 2020 is presented in Table 3.

## **AIR QUALITY IMPACT ANALYSIS**

### **METHODOLOGY AND SIGNIFICANCE THRESHOLDS**

Air quality modeling was performed in general accordance with the methodologies outlined in the SDAPCD 2009 RAQS to identify both construction and operational emissions associated with the proposed project. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 which incorporates current air emission data, planning methods and protocol approved by CARB.

As referenced, construction activities would include, clearing and vegetation removal, grading, widening Siempre Viva Road, construction of the utilities and related improvements as well as paving driveways and parking areas. Construction activities would require the use of equipment that would generate criteria air pollutant emissions. For modeling purposes, it was assumed that all construction equipment used would be diesel-powered. Construction emissions associated with development of the proposed project were quantified by estimating the types of equipment, including the number of individual pieces of equipment,





Figure 3 —Receiver Location



**Table 3**  
**Ambient Air Quality Data**

Pollutant	2018	2019	2020
Ozone, ppm - Worst 8-Hour Average	0.078	0.062	0.100
Number of days of State 1-hour exceedances (>0.070 ppm)	1	0	10
Number of days of Federal exceedances (>0.070 ppm) <sup>1</sup>	1	0	10
Particulate Matter <10 microns, µg/m <sup>3</sup> Worst 24 Hours*	55	199	*
Number of samples of State exceedances (>50 µg/m <sup>3</sup> )	18	15.9	*
Number of samples of Federal exceedances (>150 µg/m <sup>3</sup> )	0	6.6	*
Particulate Matter <2.5 microns, µg/m <sup>3</sup> Worst 24 Hours	50.8	34.3	66.8
Number of samples of State exceedances (>50 µg/m <sup>3</sup> )	*	*	*
Number of samples of Federal exceedances (>150 µg/m <sup>3</sup> )	*	*	*

<sup>1</sup> – Federal O3 standard reduced from 75 ppm to 70 ppm in October 2015

\*Insufficient data to determine number of exceedances

Data from the Otay Mesa Donovan Correctional Facility, 480 Alta Road, San Diego.

Source: California Air Resources Board, 2018, 2019, 2020 Air Quality Data Summaries available at:

<http://www.arb.ca.gov/adam/topfour/topfourdisplay.php>. Accessed November 11, 2021.

that would be used on-site during each of the construction phases as well as off-site haul trips to remove demolition debris. Construction emissions are analyzed using the regional thresholds established by the SDAPCD and published under Rule 20-2.

Operational emissions include mobile source emissions, energy emissions and area source emissions. Mobile source emissions are generated by motor vehicle trips associated with operation of the project. Emissions attributable to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, use of consumer products and painting. To determine whether a regional air quality impact would occur, the increase in emissions would be compared with the SDAPCD recommended regional thresholds for operational emissions.

Thresholds of Significance. Based on City of San Diego Significance Determination Thresholds Guidelines, a project would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;*
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);*

- d) *Expose sensitive receptors to substantial pollutant concentrations;*
- e) *Create objectionable odors affecting a substantial number of people. or*
- f) *Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located.*

A significant adverse air quality impact may occur when a project individually or cumulatively interferes with progress toward the attainment of the ozone standard by generating emissions that equal or exceed the established long term quantitative thresholds for pollutants or exceed a state or federal ambient air quality standard for any criteria pollutant.

As referenced, the SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources (SDAPCD, 2015). With the exception of Volatile Organic Compounds (VOCs) and PM<sub>2.5</sub> thresholds, the City of San Diego screening quantities shown in the *California Environmental Quality Act Significance Determination Thresholds*, Table A-2, (City of San Diego, 2016) incorporate screening level thresholds from Rule 20.2 for use in air quality reports and for determining CEQA air quality impacts. The City does not show a standard for PM<sub>2.5</sub> but does include a threshold for Reactive Organic Gas/Volatile Organic Compounds (ROG/VOC) emissions. Collectively, the standards shown in Table A-2 of the City's 2016 CEQA Determination Thresholds and the PM<sub>2.5</sub> threshold shown in Table 20.2-1 of SDAPCD Rule 20.2, are used herein to determine whether project emissions would cause a significant air quality impact. The construction and operational emission thresholds for pollutants evaluated are as follows:

- Carbon Monoxide (CO) - 550 pounds/day;
- Nitrogen Oxides (NO<sub>x</sub>) - 250 pounds/day;
- Particulate Matter (PM<sub>10</sub>) - 100 pounds/day;
- Particulate Matter (PM<sub>2.5</sub>) - 67 pounds/day;
- Sulfur Oxides (SO<sub>x</sub>) - 250 pounds/day; and
- Volatile Organic Compounds(VOCs)/Reactive Organic Gases(ROGs) - 137 pounds/day.

## CONSTRUCTION EMISSIONS

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) from soil disturbance and exhaust emissions (NO<sub>x</sub> and CO) from heavy construction vehicles. For the purpose of estimating emissions, it was assumed that entire site would be disturbed daily during overall construction. The actual disturbance area will vary from day to day depending on construction requirements; however, assuming the entire site would be disturbed will provide a conservative estimate of construction emissions during site preparation and grading emissions. As noted, construction would generally consist of vegetation removal, site preparation, grading, installation of lighting and stormwater infrastructure, paving/stripping the parking lot and paving and striping of Siempre Viva Road.

Site preparation and grading would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. The project would be required to comply with SDAPCD Rules 52 and 54 which identify measures to reduce fugitive dust and is required to be implemented at all construction sites located within the SDAB. Therefore, the following conditions, which are required to reduce fugitive dust in compliance with SDAPCD Rules 52 and 54, were included in CalEEMod for site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas and active portions of the construction site, including unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day. Note – it was assumed watering would occur three times daily for modeling purposes.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

Construction is assumed to begin in mid-2022 and be completed by late 2022. In addition to SDAPCD Rules 52 and 54 requirements, emissions modeling also accounts for the use of low-VOC paint (100 g/L for primers, sealers and undercoaters) as required by SDAPCD Rule 67. Table 4 summarizes the estimated maximum unmitigated daily emissions of pollutants occurring during the construction period.

As shown in Table 4, unmitigated emissions associated with construction of the proposed project would not exceed the SDAPCD regional construction emission thresholds for daily



emissions. Thus, the project construction would not conflict with the SIP, RAQS or AQMP, violate an air quality standard or contribute to an existing or projected violation, result in a cumulatively considerable increase in ozone or particulate matter emissions or expose receptors to substantial pollutant concentrations (**thresholds a-d**).

**Table 4**  
**Estimated Maximum Daily Construction Emissions**

Construction Phase	Maximum Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2019 Maximum lbs/day	27.5	38.8	29.5	0.06	21.4	11.6
City of San Diego Screening Thresholds	137	250	550	250	100	67
Threshold Exceeded 2019	No	No	No	No	No	No

*See Appendix for CalEEMod ver. 2020.4.0 computer model output. Summer emissions shown.*

## LONG-TERM REGIONAL (OPERATIONAL) IMPACTS

### Regional Pollutant Emissions

Table 5 summarizes emissions associated with operation of the proposed project. Operational emissions include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), landscape equipment and evaporative emissions as the lot is resurfaced and restriped over the life of the project. The majority of operational emissions are associated with vehicle trips to and from the project site. The project is assumed generate 0.41 trips per space daily. For modeling purposes, all trips were assumed to be primary trips. The fleet mix was modified to remove all heavy-duty vehicles which increased the percentage of light duty automobiles, light trucks, medium duty vehicles and motorcycles. This approach more accurately reflects the types of vehicles that would access the facility relative to those included in the default fleet mix. As shown in Table 5, the daily emissions would not exceed the SDAPCD daily thresholds for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub> or PM<sub>2.5</sub>. Therefore, the project's regional air quality impacts (**including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards per threshold c-d**) would be less than significant.

### Objectionable Odors

The proposed project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. The project would provide commercial parking services and does not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, impacts associated with objectionable odors (**significance threshold e**) would be less than significant.

**Table 5**  
**Estimated Operational Emissions**

	Estimated Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Proposed Project</b>						
Area	0.4	0.01	0.2	0.01	0.01	0.01
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	1.8	1.5	21.4	0.05	5.8	15
Maximum lbs/day	<b>2.3</b>	<b>1.5</b>	<b>21.6</b>	<b>0.05</b>	<b>5.8</b>	<b>1.5</b>
SDAPCD Thresholds	137	250	550	250	100	67
Threshold Exceeded?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

*See Appendix for CalEEMod ver. 2020.4.0 computer model output. Summer emissions shown.*

## Local Carbon Monoxide Emissions

As previously discussed, carbon monoxide is a colorless, odorless, poisonous gas that may be found in high concentrations near areas of high traffic volumes. CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. The SDAB is in attainment of state and federal CO standards; thus, CO data is no longer collected and not all monitoring stations have CO data available. The 1110 Beardsley Street monitoring station in the Barrio Logan community is the closest monitoring station to the site that provides CO data. The maximum 8-hour average CO level recorded in 2012 (the last year data were recorded) was 1.81 parts per million (ppm). Concentrations are below the 9-ppm state and federal 8-hour standard.

Although CO is not a regional air quality concern in SDAB, elevated CO levels can occur at or near intersections that experience severe traffic congestion. A localized air quality impact is considered significant if the additional CO emissions resulting from the project create a “hot spot” where the California 1-hour standard of 20.0 ppm or the 8-hour standard of 9 ppm is exceeded. This can occur at severely congested intersections during cold winter temperatures. Screening for possible elevated CO levels is recommended for severely congested intersections experiencing levels of service E or F with project traffic where a significant project traffic impact may occur. The potential for CO hotspots is based on the University of California Davis CO Protocol defined in the Transportation Project-Level Carbon Monoxide Protocol Revised December 1997 UCD-ITS-RR-97. Section 4.7 of the protocol provides specific criteria for performing a screening level CO review for projects within a CO attainment area. Specifically, project-related traffic that would worsen the LOS at intersections operating at LOS E or F, would be subject to a detailed evaluation. If not, no further review is necessary.

The CBX project was the subject of a Traffic Impact Study (TIS) prepared by LSA, Inc., (LSA) in 2011. The study provided a comprehensive evaluation of baseline and projected traffic volumes on the road network surrounding the CBX facility, including Siempre Viva Road. As part of the

study, mitigation measures were developed to address traffic impacts associated with operation of the CBX facility. Because baseline volumes and those associated with the initial operation of the CBX facility did not warrant the implementation of project-specific mitigation, the mitigation was deferred subject to the condition that periodic traffic counts would be performed. The traffic counts are intended to determine whether volumes trigger implementation of mitigation measures to address traffic impacts associated with operation of the CBX facility. Counts were performed January 31 through February 2, 2017, May 1 through 3, 2019 and most recently on November 2, 2021. Based on the 2018 volumes within the road network studied, LSA concluded that the volumes remained below those projected in the 2011 TIS and recommended continued mitigation deferral. The findings were updated in November 2021 based on current traffic counts. LSA again determined that the proposed Cross Border Xpress parking lot would not result in any new circulation deficiencies/impacts or require additional mitigation than what was identified in 2014 CBX OTN Environmental Impact Report. Based on the operation of the current road network within the project area under baseline and with project conditions, there is no evidence indicating that the proposed parking lot would cause traffic conditions that would contribute to CO hotspots or the exposure of receptors to substantial pollutant concentrations. Based on these findings, receptors would not be exposed to substantial pollutant concentrations (**threshold d**) related to CO hotspots. No further evaluation with respect to CO hotspots is required.

### **SIP/AQMP/RAQS Consistency**

As noted, the RAQS relies on information from CARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. Projects that propose development that is consistent with the growth anticipated by the General Plan is consistent with the SIP, AQMP and RAQS. The proposed project involves the construction of a 1,955-space commercial parking lot.

The site is zoned IBT-1-1. The proposed project is allowed in the IBT-1-1 zone per a Conditional Use Permit. Further, the project would not result in the construction of housing or otherwise increase the local population or induce growth. Further, it would generate less ADT than what was previously proposed for the project site. Thus, the project would be consistent with the SIP, AQMP and RAQS and significance threshold (**a – air quality plans**) referenced above. Impacts related to this threshold would be less than significant.

### **CONCLUSION**

As discussed herein, project related emissions would not exceed the SDAPCD and City of San Diego thresholds during either construction or operation. The proposed project would not conflict with the SIP, AQMP or RAQS nor would it produce objectionable odors during operation. No significant or adverse air quality impacts would occur with construction or operation of the proposed project. The project would be required to comply with SDAPCD Rules 52 and 54 during grading and other ground disturbing activities and Rule 67 which

applies to the application of coatings (i.e., pavement striping and sealants). These rules provide measures for reducing fugitive dust and evaporative emissions and is required to be implemented at all construction sites located within the SDAB. This would be considered a standard condition. No mitigation measures related to air quality would be required.



## REFERENCES

- California Air Resources Board. *Ambient Air Quality Standards*. Updated May 2016.  
<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- California Air Resources Board, *San Diego Air Quality Management Plans*, December 2016  
<http://www.arb.ca.gov/planning/sip/planarea/sansip.htm>
- California Air Resources Board. *2018, 2019, & 2020 Annual Air Quality Data Summaries*.  
<http://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed November 10, 2021.
- California Emission Estimator Model Users Guide. May 2020.
- City of San Diego, *California Environmental Quality Act Significance Determination Thresholds*,  
Development Services Department, January 2011.
- LSA, Inc., Traffic Insert prepared for CEQA Addendum, November 2021.
- San Diego Air Pollution Control District. *Smog in San Diego Fact Sheet*. January 2010.
- San Diego Air Pollution Control District. *Regional Air Quality Strategy*, December 2016.  
<http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf>.
- University of California Davis, *Transportation Project-Level Carbon Monoxide Protocol Revised*,  
December 1997.

## **Appendix A**

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*CalEEMod Air Emission Model Results –  
Summer Emissions for Construction and Operation*

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****OTN Parking Lot**  
**San Diego County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1,955.00	Space	18.90	782,000.00	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>	2021
<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 - Includes 1.8 acres of improvement area on Siempre Viva Road

Construction Phase -

Grading - Assumes complete would be disturbed during site preparation and grading.

Vehicle Trips - Project estimated to generate 0.41 trips daily per space assuming 786 ADT.  
The typical trip length is estimated to be 9.5 miles

Area Coating - Rule 67

Construction Off-road Equipment Mitigation -

Area Mitigation - Default modified to 100 g/L of VOC for Rule 67 compliance.

Water Mitigation -

Waste Mitigation -

Fleet Mix - Default fleet mix modified to reflect projected fleet mix.

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	250	100
tblFleetMix	HHD	6.1510e-003	0.00
tblFleetMix	LDA	0.54	0.60
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.21
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.0740e-003	0.00
tblFleetMix	MCY	0.03	0.01
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MH	5.6340e-003	0.00
tblFleetMix	MHD	8.6630e-003	0.00
tblFleetMix	OBUS	7.5100e-004	0.00
tblFleetMix	SBUS	9.9400e-004	0.00
tblFleetMix	UBUS	5.3400e-004	0.00
tblLandUse	LotAcreage	17.59	18.90
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	HS_TL	0.00	9.50
tblVehicleTrips	HS_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	0.00	0.41
tblVehicleTrips	SU_TR	0.00	0.41
tblVehicleTrips	WD_TR	0.00	0.41

**2.0 Emissions Summary**

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	27.5815	38.8815	29.5594	0.0636	19.8049	1.6358	21.4183	10.1417	1.5050	11.6260	0.0000	6,162.952 1	6,162.952 1	1.9486	0.0130	6,212.838 6
Maximum	27.5815	38.8815	29.5594	0.0636	19.8049	1.6358	21.4183	10.1417	1.5050	11.6260	0.0000	6,162.952 1	6,162.952 1	1.9486	0.0130	6,212.838 6

**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	27.5815	38.8815	29.5594	0.0636	8.9935	1.6358	10.6069	4.5853	1.5050	6.0697	0.0000	6,162.952 1	6,162.952 1	1.9486	0.0130	6,212.838 6
Maximum	27.5815	38.8815	29.5594	0.0636	8.9935	1.6358	10.6069	4.5853	1.5050	6.0697	0.0000	6,162.952 1	6,162.952 1	1.9486	0.0130	6,212.838 6

	ROG	NOx	CO	SO2	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	54.59	0.00	50.48	54.79	0.00	47.79	0.00	0.00	0.00	0.00	0.00	0.00

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.4447	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8573	1.5367	21.4088	0.0552	5.7801	0.0322	5.8123	1.5316	0.0297	1.5612		5,577.772 1	5,577.772 1	0.2268	0.1582	5,630.575 2
<b>Total</b>	<b>2.3020</b>	<b>1.5385</b>	<b>21.6092</b>	<b>0.0552</b>	<b>5.7801</b>	<b>0.0329</b>	<b>5.8131</b>	<b>1.5316</b>	<b>0.0304</b>	<b>1.5620</b>		<b>5,578.199 9</b>	<b>5,578.199 9</b>	<b>0.2280</b>	<b>0.1582</b>	<b>5,631.031 5</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	0.3553	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8573	1.5367	21.4088	0.0552	5.7801	0.0322	5.8123	1.5316	0.0297	1.5612		5,577.772 1	5,577.772 1	0.2268	0.1582	5,630.575 2
<b>Total</b>	<b>2.2126</b>	<b>1.5385</b>	<b>21.6092</b>	<b>0.0552</b>	<b>5.7801</b>	<b>0.0329</b>	<b>5.8131</b>	<b>1.5316</b>	<b>0.0304</b>	<b>1.5620</b>		<b>5,578.199 9</b>	<b>5,578.199 9</b>	<b>0.2280</b>	<b>0.1582</b>	<b>5,631.031 5</b>



## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	3.88	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	6/14/2022	5	10	
2	Grading	Grading	6/15/2022	7/26/2022	5	30	
3	Paving	Paving	7/27/2022	8/23/2022	5	20	
4	Architectural Coating	Architectural Coating	8/24/2022	9/20/2022	5	20	

**Acres of Grading (Site Preparation Phase): 15****Acres of Grading (Grading Phase): 90****Acres of Paving: 18.9****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 46,920 (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	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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	8	20.00	0.00	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	66.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**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>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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	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	0.0525	0.0342	0.4661	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		136.3874	136.3874	3.9400e-003	3.5400e-003	137.5405
<b>Total</b>	<b>0.0525</b>	<b>0.0342</b>	<b>0.4661</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>136.3874</b>	<b>136.3874</b>	<b>3.9400e-003</b>	<b>3.5400e-003</b>	<b>137.5405</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			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>8.8457</b>	<b>1.6126</b>	<b>10.4582</b>	<b>4.5461</b>	<b>1.4836</b>	<b>6.0297</b>	<b>0.0000</b>	<b>3,686.0619</b>	<b>3,686.0619</b>	<b>1.1922</b>		<b>3,715.8655</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	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	0.0525	0.0342	0.4661	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		136.3874	136.3874	3.9400e-003	3.5400e-003	137.5405
<b>Total</b>	<b>0.0525</b>	<b>0.0342</b>	<b>0.4661</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>136.3874</b>	<b>136.3874</b>	<b>3.9400e-003</b>	<b>3.5400e-003</b>	<b>137.5405</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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
<b>Total</b>	<b>3.6248</b>	<b>38.8435</b>	<b>29.0415</b>	<b>0.0621</b>	<b>9.2036</b>	<b>1.6349</b>	<b>10.8385</b>	<b>3.6538</b>	<b>1.5041</b>	<b>5.1579</b>		<b>6,011.4105</b>	<b>6,011.4105</b>	<b>1.9442</b>		<b>6,060.0158</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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	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	0.0584	0.0380	0.5179	1.5000e-003	0.1643	9.3000e-004	0.1652	0.0436	8.6000e-004	0.0444		151.5416	151.5416	4.3800e-003	3.9300e-003	152.8228
<b>Total</b>	<b>0.0584</b>	<b>0.0380</b>	<b>0.5179</b>	<b>1.5000e-003</b>	<b>0.1643</b>	<b>9.3000e-004</b>	<b>0.1652</b>	<b>0.0436</b>	<b>8.6000e-004</b>	<b>0.0444</b>		<b>151.5416</b>	<b>151.5416</b>	<b>4.3800e-003</b>	<b>3.9300e-003</b>	<b>152.8228</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
<b>Total</b>	<b>3.6248</b>	<b>38.8435</b>	<b>29.0415</b>	<b>0.0621</b>	<b>4.1416</b>	<b>1.6349</b>	<b>5.7765</b>	<b>1.6442</b>	<b>1.5041</b>	<b>3.1483</b>	<b>0.0000</b>	<b>6,011.4105</b>	<b>6,011.4105</b>	<b>1.9442</b>		<b>6,060.0158</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	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	0.0584	0.0380	0.5179	1.5000e-003	0.1643	9.3000e-004	0.1652	0.0436	8.6000e-004	0.0444		151.5416	151.5416	4.3800e-003	3.9300e-003	152.8228
<b>Total</b>	<b>0.0584</b>	<b>0.0380</b>	<b>0.5179</b>	<b>1.5000e-003</b>	<b>0.1643</b>	<b>9.3000e-004</b>	<b>0.1652</b>	<b>0.0436</b>	<b>8.6000e-004</b>	<b>0.0444</b>		<b>151.5416</b>	<b>151.5416</b>	<b>4.3800e-003</b>	<b>3.9300e-003</b>	<b>152.8228</b>

**3.4 Paving - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.5787</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>		<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>



## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.4 Paving - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.3884	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		113.6562	113.6562	3.2800e-003	2.9500e-003	114.6171
<b>Total</b>	<b>0.0438</b>	<b>0.0285</b>	<b>0.3884</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>113.6562</b>	<b>113.6562</b>	<b>3.2800e-003</b>	<b>2.9500e-003</b>	<b>114.6171</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	2.4759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>3.5787</b>	<b>11.1249</b>	<b>14.5805</b>	<b>0.0228</b>		<b>0.5679</b>	<b>0.5679</b>		<b>0.5225</b>	<b>0.5225</b>	<b>0.0000</b>	<b>2,207.6603</b>	<b>2,207.6603</b>	<b>0.7140</b>		<b>2,225.5104</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.4 Paving - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.3884	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		113.6562	113.6562	3.2800e-003	2.9500e-003	114.6171
<b>Total</b>	<b>0.0438</b>	<b>0.0285</b>	<b>0.3884</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>113.6562</b>	<b>113.6562</b>	<b>3.2800e-003</b>	<b>2.9500e-003</b>	<b>114.6171</b>

**3.5 Architectural Coating - 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					
Archit. Coating	27.1843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>27.3888</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.5 Architectural Coating - 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	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	0.1926	0.1254	1.7089	4.9500e-003	0.5422	3.0600e-003	0.5452	0.1438	2.8200e-003	0.1466		500.0872	500.0872	0.0145	0.0130	504.3153
<b>Total</b>	<b>0.1926</b>	<b>0.1254</b>	<b>1.7089</b>	<b>4.9500e-003</b>	<b>0.5422</b>	<b>3.0600e-003</b>	<b>0.5452</b>	<b>0.1438</b>	<b>2.8200e-003</b>	<b>0.1466</b>		<b>500.0872</b>	<b>500.0872</b>	<b>0.0145</b>	<b>0.0130</b>	<b>504.3153</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.1843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>27.3888</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.5 Architectural Coating - 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	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	0.1926	0.1254	1.7089	4.9500e-003	0.5422	3.0600e-003	0.5452	0.1438	2.8200e-003	0.1466		500.0872	500.0872	0.0145	0.0130	504.3153
<b>Total</b>	<b>0.1926</b>	<b>0.1254</b>	<b>1.7089</b>	<b>4.9500e-003</b>	<b>0.5422</b>	<b>3.0600e-003</b>	<b>0.5452</b>	<b>0.1438</b>	<b>2.8200e-003</b>	<b>0.1466</b>		<b>500.0872</b>	<b>500.0872</b>	<b>0.0145</b>	<b>0.0130</b>	<b>504.3153</b>

## OTN Parking Lot - San Diego County, Summer

## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	1.8573	1.5367	21.4088	0.0552	5.7801	0.0322	5.8123	1.5316	0.0297	1.5612		5,577.772 1	5,577.772 1	0.2268	0.1582	5,630.575 2
Unmitigated	1.8573	1.5367	21.4088	0.0552	5.7801	0.0322	5.8123	1.5316	0.0297	1.5612		5,577.772 1	5,577.772 1	0.2268	0.1582	5,630.575 2

## 4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	801.55	801.55	801.55	2,771,760	2,771,760
Total	801.55	801.55	801.55	2,771,760	2,771,760

## 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.600000	0.040000	0.210000	0.140000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.010000	0.000000	0.000000

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**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					
Parking Lot	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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>



## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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	lb/day										lb/day					
Parking Lot	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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	0.3553	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563
Unmitigated	0.4447	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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	0.1490					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0187	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563
<b>Total</b>	<b>0.4447</b>	<b>1.8400e-003</b>	<b>0.2004</b>	<b>1.0000e-005</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>		<b>0.4279</b>	<b>0.4279</b>	<b>1.1400e-003</b>		<b>0.4563</b>

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0187	1.8400e-003	0.2004	1.0000e-005		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004		0.4279	0.4279	1.1400e-003		0.4563
<b>Total</b>	<b>0.3553</b>	<b>1.8400e-003</b>	<b>0.2004</b>	<b>1.0000e-005</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>		<b>0.4279</b>	<b>0.4279</b>	<b>1.1400e-003</b>		<b>0.4563</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

Use Water Efficient Irrigation System

## OTN Parking Lot - San Diego County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**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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