777 North Front Street Project

Recirculated Draft Environmental Impact Report

SCH# 2018041012

prepared by

City of Burbank
Community Development Department
150 North Third Street
Burbank, California 91502
Contact: Leonard Bechet, Senior Planner

prepared with the assistance of

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

July 2019

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Introduction

This document is the focused Recirculated Draft Environmental Impact Report (Recirculated Draft EIR) for the proposed 777 North Front Street Project (hereafter referred to as the "proposed Project' or "Project"). The proposed Project would involve construction of 625,806 square feet (sf) of multi-family residential uses (573 residential units), 1,067 sf of retail gallery uses, and a 307-room hotel. The proposed Project will require approval of discretionary actions by the City and other governmental agencies. Therefore, the Project is subject to environmental review requirements under the California Environmental Quality Act (CEQA). The purpose of this document is to analyze potential environmental impacts associated with public comments received regarding the analyses for air quality and greenhouse gas (GHG) emissions.

This section discusses: (1) the EIR background; (2) the purpose and legal authority for preparing a Recirculated Draft EIR; (3) the organization of the Recirculated Draft EIR; and (4) the environmental review process.

Environmental Impact Report Background

In 2018, the City initially reviewed the proposed Project and prepared a Draft Environmental Impact Report ("Original Draft EIR"). A Notice of Preparation (NOP) for a Draft EIR was prepared in compliance with Section 15082 of the CEQA Guidelines by the Community Development Department and distributed to the State Clearinghouse, Office of Planning and Research, responsible agencies and other interested parties on April 3, 2018. The NOP for the Original Draft EIR was circulated for 30 days, until May 2, 2018. Appendices A-1 and A-3 to the Original Draft EIR contain a copy of the NOP and written responses to the NOP, respectively. The Original Draft EIR was released for public review on March 22, 2019 and was available for review and comments until May 6, 2019. A Final EIR has not yet been prepared for the proposed project because, based on issues raised in comments on the Draft EIR, sections to the Original Draft EIR have been revised and recirculated.

The Recirculated Draft EIR includes revisions to three sections of the Original DEIR, consisting of Section 2, *Project Description*; Section 4.2, *Air Quality*; and Section 4.5, *Greenhouse Gas Emissions*. In addition, Appendix D (*Air Quality and Greenhouse Gas Study*) of the Original Draft EIR has been revised and is included in the Recirculated Draft EIR.

As discussed in detail below, the City is recirculating the Draft EIR pursuant to CEQA Guidelines Section 15088.5, Subdivisions a(1), a(3) and (c), which require the modified or new sections of an EIR to be circulated in certain circumstances. The full Original Draft EIR is available for public viewing at the Community Services Building located at 150 North Third St., 1st Floor, Burbank, CA 91510, and on the City's website using the following link:

https://www.burbankca.gov/departments/community-development/planning/current-planning/777-front-street

Purpose and Legal Authority

CEQA Guidelines Section 15088.5 requires that a lead agency recirculate an EIR, or portions of an EIR, when significant new information is added to the EIR after public notice for public review of the Draft EIR, but prior to certification. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project, or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponent has declined to implement.

> "Significant new information" requiring recirculation includes, for example, a disclosure showing that:
>
> (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
>
> (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
>
> (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
>
> (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (CEQA Guidelines §15088.5, subdivisions (a)[1]-[4])

In this case, new information requiring recirculation includes modifications to the following Draft EIR sections: Project Description, Air Quality, and Greenhouse Gas Emissions.

Under CEQA, if the revision is limited to a few chapters or portions of the Draft EIR, the lead agency only needs to recirculate the chapters or portions that have been modified (CEQA Guidelines §15088.5, subdivisions (c)). Recirculation of a Draft EIR requires notice pursuant to CEQA Guidelines section 15087 and consultation pursuant to CEQA Guidelines section 15086.

Summary of the Recirculated Draft EIR

In accordance with State mandates, the City has prepared this Recirculated Draft EIR pursuant to CEQA Guidelines Section 15088.5, Subdivision (g). This Recirculated Draft EIR is organized into seven sections each dealing with a separate aspect of the required content of an EIR as described in the CEQA Guidelines. To help the reader locate information of particular interest, a brief summary of the contents of each chapter of the Recirculated Draft EIR is provided. Refer to the Original Draft EIR for the chapters and sections that are not included in the Recirculated Draft EIR.

- **Introduction.** This section provides introductory information, background information regarding the Original EIR, purpose and legal authority of the Recirculated Draft EIR, and describes the environmental review process for the Recirculated Draft EIR.
- **Section 2: Project Description.** This section identifies the project location, summarizes the proposed Project (including changes since the Original Draft EIR was published), identifies

Project characteristics and associated anticipated development (including changes since the Original Draft EIR was published), and outlines the Project objectives.

- **Section 4: Environmental Impact Analysis (Air Quality and Greenhouse Gas Emissions).** This section contains the revised environmental impact sections that supersede the corresponding sections of the Original Draft EIR.
- **Appendix D.** Data supporting the air quality and GHG emissions analyses of the Recirculated Draft EIR are provided in Appendix D (updated *Air Quality and Greenhouse Gas Emissions Study*).

The revised project for the Recirculated Draft EIR consists of the same development and land uses described in Section 2, *Project Description*, of the Original Draft EIR. The residential component of the Project would include construction of one 279,162 square-foot, seven-story building containing 252 units and one 346,644 square-foot, eight-story building containing 321 units for a total of 573 residential units. The hotel component of the Project would include construction of one 212,250 square-foot, seven-story building at the southeastern end of the Project site containing 307 hotel rooms and ancillary uses. The proposed Project would include a publicly accessible plaza area on the adjacent City-owned property located to the south of the project site.

Revisions to the air quality section includes a re-analysis of the air quality emissions calculations (using the California Emissions Estimator Model [CalEEMod]) based on an increase in the estimated amount of grading from approximately 90,000 cubic yards in the Original Draft EIR to 127,000 cubic yards under the Recirculated Draft EIR. In addition, the analysis includes an estimate of the overlapping operation and construction emissions beftween 2022 and 2025, which would exceed the threshold for nitrogen oxides (NO_X) emission. As such, a new mitigation measure (AQ-3 – NO_X Reduction from Combined Operational and Construction Emissions) has been added to reduce the impact to a less than significant level.

The GHG emissions section includes a quantitative analysis of the GHG emissions and an expanded qualitative analysis to include the Project's consistency with the California Air Resources Board's 2017 Scoping Plan. The *Air Quality and Greenhouse Gas Emissions Study* has been updated to reflect the revisions made to these sections.

Environmental Review Process

The Recirculated Draft EIR is being circulated for a 45-day review period during which written comments on the scope and adequacy of the document can be submitted to the City Community Development Department. The public review period is from July 1, 2019 until August 14, 2019. All comments on the Recirculated Draft EIR should be sent to the following City contact: Leonard Bechet, Community Development Department, Planning Division located at 150 North Third St., Burbank, CA 91510 by December 13, 2018. As CEQA Guidelines Section 15088.5, Subdivision (f)(2) permits, the City requests that reviewers limit the scope of their comments to the revised sections and appendices included in the Recirculated Draft EIR. Following the 45-day public review period, the City will prepare responses to the written comments received during the recirculation period that relate to the revised and recirculated portions of the Recirculated Draft EIR, as well as written comments previously received during the initial circulation period that relate to the portions of the Original Draft EIR that have not been recirculated and will compile the comments and responses into a Final EIR, which will consist of the following documents:

- Original and Recirculated Draft EIR (without the sections that have been superseded and replaced by the corresponding sections in this Recirculated Draft EIR). Upon release of the Final

EIR, the Executive Summary will be revised to reflect the Recirculated Draft EIR. The Notice of Preparation and comments are included as part of the Original DEIR;

- Comments and Responses to Comments on the Recirculated Draft EIR, received during the 45-day public comments period (responses to comments related to recirculated sections included in the Recirculated Draft EIR only);
- Comments and Responses to Comments on all sections of the Original Draft EIR received during the original 45-day public comment period; and
- Corrections or additions to the Recirculated Draft EIR, if any.

The Final EIR will provide the basis for City decision-makers, such as the City Planning Commission and City Council to consider the environmental implications of the proposed project as well as possible ways to mitigate any potential significant environmental impacts. Prior to planning on the proposed project, the City must certify that the Final EIR has been completed in compliance with CEQA and was presented to the City's decision-making body, that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the proposed project, and that the Final EIR reflects the lead agency's independent judgment and analysis.

2 Project Description

This section describes the proposed Project, including the Project applicant, the Project site and surrounding land uses, major Project characteristics, Project objectives, and discretionary actions needed for approval.

2.1 Project Applicant

SJ4 Burbank LLC c/o La Terra Development
777 South Highway 101, Suite 107
Solana Beach, California 92075

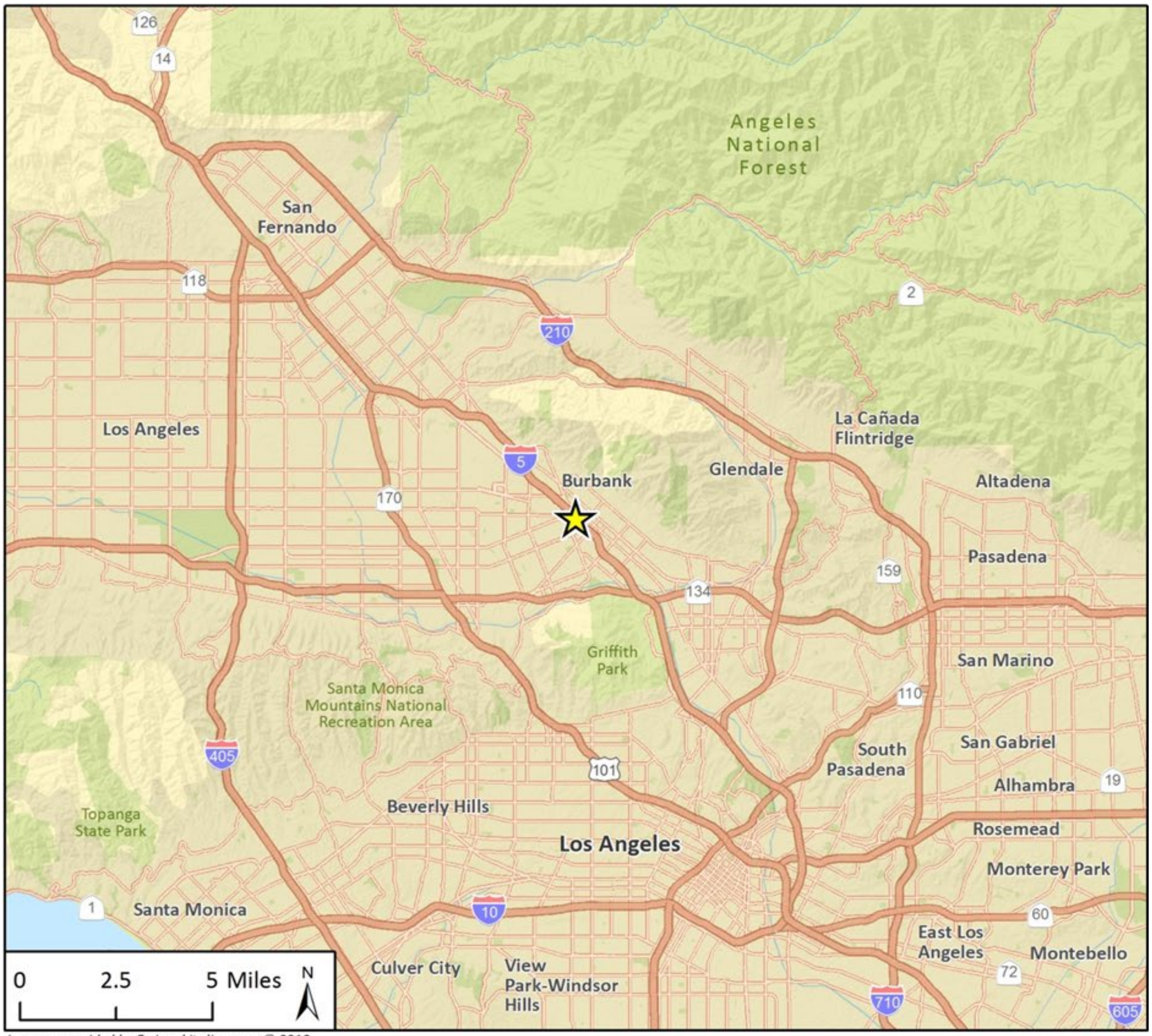
2.2 Lead Agency Contact Person

Leonard Bechet, Senior Planner
City of Burbank
Community Development Department
150 North Third Street
Burbank, California 91510
(818) 238-5250

2.3 Project Location

The Project site is located at 777 North Front Street in the City of Burbank, California. The Project site is a generally flat, irregularly-shaped parcel with an area of 352,297 square feet (8.09 acres). It is bounded by North Front Street to the west, Burbank Boulevard to the north, the Golden State Freeway (Interstate 5 or I-5) to the east, and West Magnolia Boulevard to the southeast. The Project site currently contains mounds of soil and construction materials throughout the Project site as a result of its current use as a construction material storage site for the California Department of Transportation (Caltrans) during the I-5 Freeway project. The Project site is partially fenced along Front Street. The Project site is regionally accessible from I-5, and locally accessible from West Burbank Boulevard and North Front Street. Figure 2-1 shows the regional location of the Project site and Figure 2-2 shows the location of the Project site in its neighborhood context. As shown in Figure 2-2, the privately-owned parcel makes up approximately 6.77 acres of the Project site and the City-owned property makes up approximately 1.22 acres. The Project site is in an industrial and commercial area, has been previously graded and is mostly paved, and is surrounded by transportation corridors and urban structures (commercial, office, and industrial buildings/facilities).

Figure 2-1 Regional Location



Imagery provided by Esri and its licensors © 2018.

☆ Project Location

Figure 2-2 Project Site Location

Imagery provided by Microsoft Bing and its licensors © 2018.

2.4 Existing Site Characteristics

The Project site, which includes private property and City-owned public property, is the former location of the General Water Heater Company (GWHC) that operated at the site from the 1930s until 1961. The Zero Corporation (Zero) subsequently manufactured metal cases and other products at the site from approximately 1961 to 1991 in a facility comprised of six buildings. In 1998, the Ford Leasing Development Company (FLDC) purchased the site with the intent to redevelop the property as a car dealership, which did not occur. The Project site has been dormant since 1991, aside from occasional use for storage, recreational entertainment (e.g., circus, equestrian shows, and etc.) and as a filming location for the entertainment industry. The former Zero buildings were demolished with the building slabs left intact in 2004. The Project site currently contains mounds of soil and construction materials throughout the Project site as a result of its current use as a construction material storage site for the Caltrans during the I-5 Freeway project. The Project site is partially fenced along Front Street.

2.5 Current Land Use Designation and Zoning

The Project site has a General Plan land use designation of Downtown Commercial and is designated as Mixed Commercial/Office/ Industrial in the Burbank Center Plan (Specific Plan). The current zoning classification for the Project site is Auto Dealership (AD).

2.6 Surrounding Land Uses

The Project site is bordered by commercial and industrial businesses across North Front Street to the west and south, Burbank Boulevard and I-5 to the north, I-5 to the east, and commercial businesses including a three-story shopping mall along with residential buildings across I-5 to the east. The Downtown Burbank Metrolink Station and a major bus hub are located southeast of the Project site. The Metrolink tracks run alongside North Front Street across from the Project site.

2.7 Project Characteristics

The Project site is comprised of approximately eight acres located on the east side of North Front Street. The proposed Project would involve clearing and excavation of the Project site and construction of three multistory buildings: two residential buildings and one building for a hotel. A total of 1,454 on-site parking spaces would also be developed as part of the Project.

The residential component of the Project would include construction of one 279,162 square-foot, seven-story building containing 252 units and one 346,644 square-foot, eight-story building containing 321 units for a total of 573 residential units. In addition, a total of 1,206 parking spaces would be provided for tenants of both residential buildings (including 63 tandem parking spaces). The proposed Project would also include 106,400 square feet of open space, including courtyards, a pool deck, publicly accessible ground floor plaza, and private balconies. Approximately 87,050 square feet would be common open space, a minimum of approximately 15 percent of which would be landscaped. Associated residential common areas and amenities constructed may include, but would not limited to a rooftop terrace, business center/internet café, coffee bar, demonstration kitchen, billiards room, resident lounge, fitness center with indoor exercise studio, resort-style pools with cabanas, Jacuzzis, public plaza and bike trail access, pet grooming station, pet park, concierge services, and bike storage. Residential courtyards and balconies would be located within the interior sides of the buildings.

The hotel component of the Project would include construction of one 212,250 square-foot, seven-story building at the southeastern end of the Project site containing 307 hotel rooms and ancillary uses and 327 associated parking spaces (including 20 tandem parking spaces). Associated hotel amenities may include but would not be limited to 1,800 square feet of restaurant space, café, bar, pool terrace, fitness center, meeting rooms, and lounge. The hotel's ancillary commercial uses would include accessory retail and restaurant uses on the ground floor. In addition, a 1,067-square foot retail gallery would be provided on Front Street near the intersection of Burbank Boulevard that would have 4 total parking spaces. Additional ancillary uses would include public and private recreational spaces consisting of courtyards, residential balconies, and sky terraces at both parking structure roof levels. The proposed Project would include a publicly accessible plaza area on the adjacent City-owned property located to the south of the project site. The plaza would be approximately 27,800 square feet and comprises four main zones: 1) the western portion of the plaza will include an open (synthetic) lawn area with informal terrace seating for multi-purpose activities; 2) a hardscape courtyard with benches and shade trees will be located in the central zone where the access stair to the Magnolia Boulevard Bridge is located; 3) at the east of the plaza, there will be a zone for fitness and general public use; and 4) along the northern perimeter (where the Project site adjoins the Interstate 5 Freeway), there will be earth mounds to provide a sound buffer and screening with clusters of tall evergreen trees.

The residential component of the Project would be developed at a density of approximately 71 units per acre, while the retail/hotel portion of the Project would be developed with a FAR of 0.58. The overall Project site would have a building coverage of 81 percent.

The Project would obtain necessary power via a connection to the Burbank Water and Power (BWP) main power plant located approximately 700 feet to the south of the Project site.

2.7.1 Proposed Site Plan

Figure 2-3 shows the proposed Project site plan. Figure 2-4 through Figure 2-7 show renderings of the proposed Project and Figure 2-8a through Figure 2-8d shows existing conditions of the Project site. Table 2-1 shows the characteristics of the proposed Project.

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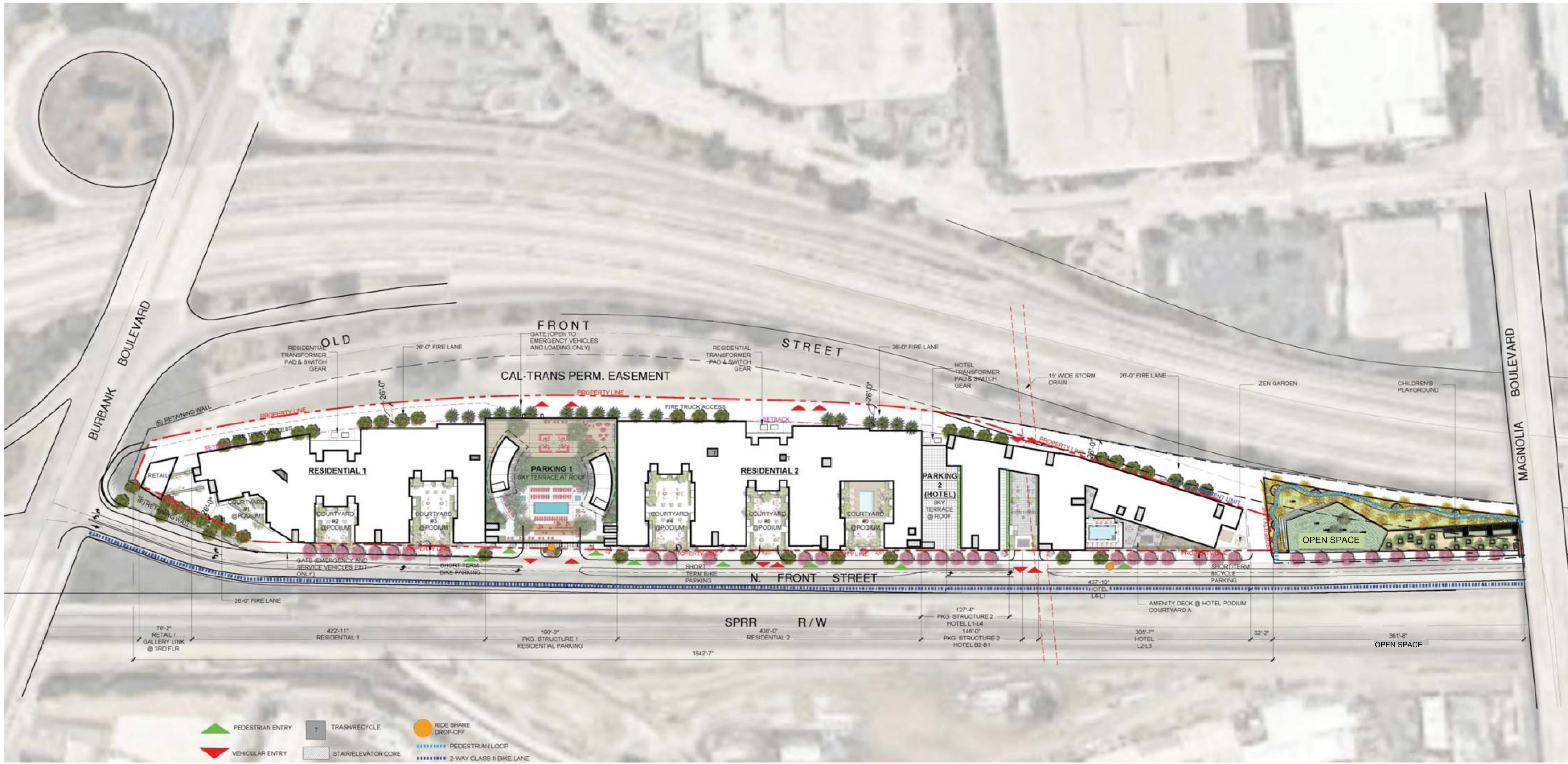
Figure 2-3 Project Site Plan



Source: LaTerra SELECT BURBANK, May 2018

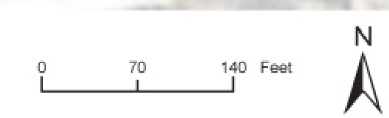


Figure 2-4 Conceptual Site Rendering – Aerial View of West Elevation

Source: LaTerra SELECT BURBANK, May 2018

Figure 2-5 Conceptual Site Rendering – Aeirel View of North Elevation

Source: LaTerra SELECT BURBANK, May 2018

Figure 2-6 Conceptual Site Rendering – East Elevation

Source: LaTerra SELECT BURBANK, May 2018

Figure 2-7 Conceptual Site Rendering – North Elevation

Source: LaTerra SELECT BURBANK, May 2018

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Figure 2-8a Project Site Photograph

View of the Project site looking northeast from the western boundary (at the northern end of the Project site)

Figure 2-8b Project Site Photograph

View of the Project site looking northeast near the northwestern corner of the Project site.

Figure 2-8c Project Site Photograph

View of the Project site looking southeast from northwestern boundary of the Projectsite

Figure 2-8d Project Site Photograph

View of the vacant lot and former building pads

Table 2-1 Project Characteristics

Component	Floor Area (SF)	Height	Units/Rooms
Residential[1]	645,806	–	–
Building 1	279,162	7-story, 80’-4”	252
Building 2	346,644	8-story, 82’-6”	321
Retail Gallery	1,067	1-story	–
Hotel[2]	212,350	7-story	307
Total	**859,223**	–	–
Open Space Area			
Courtyards	26,950		
Pool Deck	32,300		
Publicly Accessible Plaza	27,800		
Private Balconies	19,350		
Total Area	**106,400**		
Parking Stalls			
Type	**Residential**	**Hotel**	**Retail**
Standard	1,121	296	4
ADA Accessible	22	11	–
Tandem	63	20	–
Total			**1,537**
Bicycle Stalls			
Type	**Residential**	**Hotel**	**Retail**
Short-term	14	4	–
Long-term	43	12	–
Total			73

[1] Residential area includes 20,000 square-foot buffer to the proposal residential area as well as the residential space in both Buildings 1 and 2.

[2] Hotel area includes square footage of 307 hotel rooms, 1,800 sf of restaurant space, a lounge, a bar, a meeting room, and a fitness club.

sf = square feet

The total building area of the proposed project, consisting of the residential, retail, hotel, and basement space, would be 839,223 SF. The 212,305 SF hotel would include the square footage of 307 hotel rooms, a lounge, a bar, a meeting room, a fitness club, and 1,800 SF of ancillary restaurant space and retail areas. The courtyards and balconies associated with the residential uses would face towards the interior sides of the buildings, or Front Street, away from the freeway. As discussed above, the Project would include a publicly accessible, privately maintained 27,800 SF publicly accessible open space on the City-owned property located to the south of the Project site that would include a pedestrian bridge that connects the plaza to Magnolia Boulevard and downtown Burbank. Along the north/northeast perimeter where the Project site is adjacent to the I-5 Freeway, there would be earthen mounds and wall along the eastern edge of the plaza to provide a sound buffer and landscape screening.

2.7.2 Parking and Site Access

The Project would include 1,143 parking spaces for the residential uses, four parking spaces for the retail gallery, and 307 parking spaces for the hotel. Total parking would be 1,537 spaces, which exceeds the required parking by 84 spaces. The Project would include one subterranean level for parking at the southern half of the project site beneath a portion of the southern residential building and also beneath the hotel. One to two levels of parking would be between grade and the residential units in both residential buildings, as well as a seven-story parking structure between the residential buildings. There would also be a five-story parking structure adjacent to the hotel for hotel parking.

The Project would include bicycle parking spaces for both the residential, retail gallery and the hotel uses. The residential portion would provide 14 short term bicycle parking spaces near the main entrance and 43 long term spaces in the garage. The hotel and retail gallery portion would provide four short term bicycle parking spaces near the main entrance and 12 long term spaces in the garage. The total bicycle parking for the proposed Project would include 73 spaces.

The primary entries for the hotel, retail gallery, and apartments would be provided along Front Street. Loading for the residential units would be provided at two loading areas along the Project site's Front Street frontage lane and loading for the hotel would be provided via a loading dock located at the northwest corner of the building with access along the fire truck access lane. The Project would include widening Front Street to include a turn lane and a bike lane.

2.7.3 Drainage

The Project would include installation of two storm drains along the easterly boundary of the Project site. Installation of a storm drain connector to route on-site sheet flow to the regional City-owned stormwater drainage system would be included in the southeastern portion of the site.

2.7.4 Utilities

The City of Burbank Public Works Department provides the following utility services to the Project site: solid waste, wastewater, and stormwater. Burbank Water and Power (BWP) supplies electricity and water and the Southern California Gas Company provides gas to the Project site.

To comply with the City's Low Impact Development (LID) standards, the Project would implement an LID Plan and be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through evapotranspiration, bioretention, and/or rainfall harvest and use.

2.7.5 Construction and Grading

Construction of the Project is expected to be completed in three phases over a period of approximately five years, with construction beginning in September 2019 and ending in September 2025. The anticipated schedule for construction as follows:

- **Phase 1: Residential Building 1 and Earthwork**
  - Site Preparation: September – November 2019
  - Grading: December 2019 – March 2020
  - Building Construction: April 2020 – July 2022

- **Phase 2: Residential Building 2**
  - Building Construction: April 2020 – September 2025
- **Phase 3: Hotel**
  - Building Construction: April 2020 – September 2025

The entire Project site would be graded and approximately 127,000 cubic yards of cut soil would be exported from the Project site. Given an estimated haul truck capacity of 16 cubic yards, approximately 7,938 outbound haul trucks (equivalent to 15,876 truck trips) would be required for soil export. In conformance with SCAGMD Rule 403 regulations regarding control of fugitive dust, the Project site would be watered daily as needed to control dust from grading and construction activities.

Building construction would involve widening of Front Street to include a bike lane adjacent to the Project site that would require approximately 15,000 square feet of additional excavation and paving. Excavated soil and material would be utilized on-site. Total areas paved both within the Project site and on Front Street would be approximately 1.1 acres.

2.7.6 Subsurface Assessment and Remediation

Extensive environmental assessment has been conducted since the early 1990s at the Project site, and remediation was conducted from 1998 through 2001. Based on a review of documents provided by the Applicant, as well as review of pertinent documents available on the State Water Resources Control Board (SWRCB) GeoTracker database, identified contaminants of potential concern (COPCs) have been detected in the subsurface at the Project site. COPCs include metals and volatile organic compounds (VOCs). Specifically, tetrachloroethylene (PCE), copper, lead, and hexavalent chromium (CrVI), have been identified as COPCs detected in shallow soils (up to 12 feet below ground surface (bgs)) and PCE and trichloroethylene (TCE) have been identified as COPCs detected in soil vapor at depths of up to 90 feet bgs. The Project site is currently under the oversight of the Los Angeles Regional Water Quality Control Board (LARWQCB). Section 4.6, *Hazards and Hazardous Materials*, includes a detailed summary of environmental assessments previously conducted, as well as remediation and engineering controls currently planned for the site.

Soil vapor assessment conducted following the 1998-2001 remedial activities indicated that PCE and TCE remained in soil vapor at concentrations exceeding the worst-case human health risk assessment risk-based concentrations (RBCs). In December 2018, the Applicant submitted to LARWQCB a revised draft Response Plan (RP) in accordance with the provisions of the California Land Reuse and Revitalization Act (CLRRA) of 2004. The RP was prepared by Geosyntec and will address identified subsurface contamination resulting from historical operations at the Project site. A Soil Contingency and Management Plan (SCMP) prepared by Leighton is included as an appendix to the RP (included as Appendix G of this DEIR).

Geosyntec's RP will address elevated VOCs in soil and soil vapor, and the SCMP will address elevated metals present in shallow soil. PCE, copper, lead, and Cr(VI) have been detected in soil above their respective US EPA Regional Screening Levels (RSLs).

Remedial measures and engineering controls are intended to protect human health by limiting exposures to COPCs in soil and soil vapor via dermal contact, ingestion, and/or inhalation of particulates/vapors present in the indoor/ambient air; reduce the potential for migration of COPCs to underlying groundwater and protect beneficial uses of groundwater to the extent feasible and practicable; and allow for redevelopment. The proposed remediation goals and remedial and mitigation alternatives are summarized below.

Shallow Soil – To remediate metals and VOCs in shallow soil at concentrations exceeding cleanup goals, Geosyntec proposes excavation and offsite disposal. The proposed development will require excavations to varying depths across the Project site, which are expected to generate approximately 32,000 cubic yards of metal impacted soil. Confirmation samples will be collected from sidewalls and bottoms of excavations and will be analyzed for COPCs. Analytical results for COPCs will be compared to US EPA Residential RSLs. If additional excavation is required beyond the base of the grading plan to achieve the RSLs, the excavated areas will be backfilled with imported clean soil.

An SCMP prepared by Leighton was issued as an appendix to the RP. The SCMP was prepared to facilitate proper characterization and handling of known and suspect contaminated soil, as well as the handling of historical improvements that may be encountered during demolition, grading, and construction activities.

The SCMP provides sampling and analysis protocols for handling and disposing of known contaminated soil, Rule 1166 monitoring for VOC-contaminated soil, and sampling previously unidentified contaminated soil. Environmental monitoring will take place during excavation activities and will include visual observation and screening for VOCs using a photoionization detector (PID). The environmental consultant will be responsible for directing segregation and stockpiling of soils, collecting confirmation soil samples and samples for waste profiling, and conducting air monitoring during excavation activities.

The SCMP further provides screening levels and hazardous waste thresholds for soil and lists disposal facilities that will accept the various types of waste that will potentially be generated at the Project site. Soil deemed non-hazardous will be transported to the Simi Valley Landfill, and several options are provided for California-hazardous and RCRA-hazardous waste, if encountered.

Additional information pertaining to the remedial excavation of shallow soils is provided in Section 4.6, *Hazards and Hazardous Materials*.

Shallow Soil Vapor Impacts

Engineering controls are proposed to prevent VOC migration into indoor air. Remediation goals are not applicable to this mitigation measure. Proposed engineering controls are described in the Project Design Features section below.

Deep Soils and Soil Vapor

COPCs in deep soil, from the base of final grade to approximately 90 feet bgs, as wells as in soil vapor, will be remediated to the extent feasible and practicable via SVE. Because offsite sources of groundwater contamination may continue to impact deep soil and soil vapor, numerical cleanup goals may not be achievable and it may be necessary for goals to be performance-based, whereby asymptotic influent concentrations will serve as evidence that VOCs have been removed to the extent feasible and practicable.

Groundwater

Groundwater remediation is not proposed at this time, as offsite sources continue to impact groundwater. SVE will be implemented in deep soil in an effort to reduce further migration of VOCs to groundwater. If any perched groundwater is encountered it will be managed in accordance with the SCMP and the development of a dewatering plan may be required, which would be overseen by the LARWQCB.

2.7.7 Green Building Features

The Project would be designed to be the equivalent of the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Gold Certified. The Project site would also be designed to obtain the WELL Certified under the USGBC[1]. The Project is oriented and designed to maximize pedestrian-oriented landscaped open space. Project materials include sustainable products and locally sourced materials that would include an energy efficient HVAC system and MERV filters, cool roofs, installation of roof top solar that would go towards the City's long term goal of providing 10% of the building's modeled energy use from renewable sources, LED lighting, and high performance glazing. Water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping and use of recycled water would be included. Indoor environmental quality favors formaldehyde-free finishes, low-allergen materials, and use of products with minimum off-gassing or low volatile organic compounds (VOC's). Development under the proposed Project would also comply with all Tier 1 applicable provisions of the 2016 California Green Building Standards Code (CALGreen Code).

2.7.8 Applicant-Proposed Project Design Features (PDFs)

The following are Project Design Features (PDFs) proposed by the applicant that would reduce or negate potential impacts concerning light and glare, air quality emissions, nesting birds during the construction period, geological hazards, hazardous materials at the Project site, hydrology, signage and noise.

Aesthetics PDF 1 – Photometric Lighting Plan

The applicant will submit a photometric lighting plan at the time of Plan Check review (prior to building permit issuance for each phase) that identifies all: exterior structure lighting; landscape and perimeter lighting; or rooftop lighting. The photometric plan will ensure that there will be no spillover lighting or glare on adjacent streets or properties, to the satisfaction of the CDD Director.

All building-mounted lighting that will be directed onto the Project site shall be shielded so as not to illuminate adjacent public rights-of-way and/or freeway.

All projects shall comply with Title 9, Chapter 1, of the BMC, and the 2016 and latest edition of the California Building Code (CBC), California Residential Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Green Building Standards and Building Energy Efficiency Standards. Beginning January 1, 2019 the new 2018 CBCs go into effect.

Air Quality PDF 1 – CAL Green Building Standards Code

The Project shall incorporate the requirements of the CAL Green Building Standards Code. The Project shall be provided with minimum Tier 1 or LEED Gold certification. The Green Building Plan shall be submitted to the Chief Building Official for review.

[1] The WELL Building Standard is a performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and wellbeing. WELL Certified spaces and developments aim to create a built environment that improve nutrition, fitness, mood, and sleep patterns. (USGBC 2018).

Air Quality PDF 2 – Energy Star Appliances

Developer shall install Energy Star or equivalent appliances or equivalent energy-efficient appliance models in new residential units, which shall include a standard-size refrigerator in each unit. Installation of Energy Star or equivalent appliances shall be demonstrated to the satisfaction of the CDD Director prior to issuance of certificate of occupancy.

Air Quality PDF 3 – Air Quality Control Measures

1 Prior to issuance of any building permits for any phase, the Developer shall incorporate the following as Project Design Features in each phase of the Project:

   a. Prior to any building permit (for each phase), the Developer shall install, operate, and maintain an HVAC system that utilizes high-efficiency filters with Minimum Efficiency Reporting Value (MERV) 15 minimum or higher for the residential units.

      i. Developer may prepare and submit an air quality engineering study (for a unit-by-unit analysis) related to the MERV filtration system(s) that must be incorporated into the Project. Individual units may be provided a MERV 13, MERV 14 or MERV 15 (but not less than MERV 13) filtration system depending on the recommendations of the air quality study (i.e., depending on proximity to freeway and exposure levels); developer shall pay for 3rd party air quality expert to review submitted air quality engineering study

      ii. If the Developer elects to not prepare and submit an air quality engineering study (for a unit-by-unit analysis), then a minimum of MERV 15 shall be required for every residential unit in each building/phase.

      iii. HVAC systems with the specified MERV filter ratings are required elements of the Project design, and must be incorporated at the time of original construction.

   b. Locate the air intakes for the residential units as far from the freeway as practicable. Precise location will be ascertained and reviewed during Plan Check prior to issuance of any building permit for each phase.

   c. Provide a written notice to all new residents and tenants that disclose the potential risk from living in close proximity to a freeway, and that opening unit windows may reduce the effectiveness of the air filtration system and increases their individual exposure.

   d. Plant vegetation between residential receptors and the freeway (e.g., rear yard setback areas for each phase).

2 Prior to the issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce the short-term fugitive dust impacts on nearby sensitive receptors.

   a. Prohibit truck idling in excess of five minutes, on-site and off-site;

   b. All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the Project site to prevent excessive amounts of dust;

c. Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
d. Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
e. All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
f. Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
g. Gravel bed trackout aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
h. On-site and unpaved-road vehicle speed shall be limited to 15 miles per hour;
i. All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized;
j. Visible dust beyond the property line which emanates from the Project shall be prevented to the maximum extent feasible;
k. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
l. Reroute construction trucks away from congested streets or sensitive receptor areas;
m. Track-out devices shall be used at all construction site access points;
n. All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
o. Sweep streets at the end of the day with SCAQMD Rule 1186 and 1186.1 compliant sweepers if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water);
p. Re-route construction trucks away from congested streets or sensitive receptor areas;
q. The Project proponent shall survey and document the proposed Project's construction areas and identify all construction areas that are served by electricity. Onsite electricity, rather than temporary power generators, shall be used in all construction areas that are demonstrated to be served by electricity.

Biological PDF 1 – Nesting Bird Survey

While common bird species are not designated special-status species, destruction of their eggs, nests, or nestlings is prohibited by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC) (Sections 3503, 3503.5, 3511, and 3513). Potentially suitable habitat for nesting birds exists on-site. If site preparation and construction activities are initiated during the nesting bird season (typically February 1 and August 31, and as early as January 1 for raptors), a preconstruction nesting bird survey must be conducted within seven days prior to initial grading or vegetation removal to determine the presence/absence, location, and status of any active nests onsite or within 100 feet of the site for nesting birds, or within 500 feet of the site for nesting raptors to comply with State CFGC and Federal MBTA regulations. If results of the nesting bird survey identify active nests that could be impacted by Project construction activities, the following measures should be applied:

- If active nests are discovered on the Project site, a qualified biologist will establish an appropriate buffer around each nest(s). Typical buffers range from 100 feet for nesting birds and up to 500 feet for raptor nests, depending on the species.
- No construction within the buffer should occur until a qualified biologist has determined the nest(s) are no longer active. Encroachment into the buffer may occur at the discretion of a qualified biologist in coordination with the City of Burbank.

Geology PDF 1 – Geotechnical Design Considerations

Excavations for the subterranean portion of the proposed multi-family residential structures are anticipated to penetrate through a majority of the existing artificial fill, if not all. Based on these considerations, the proposed multi-family residential structures shall be supported on a conventional spread foundation system deriving support in the undisturbed alluvial soils found at and below a depth of 14 feet below the existing ground surface.

The following foundation design considerations related to soil engineering must be incorporated into the Project grading and building plans, revised as needed for compliance with current California Building Code (see Section 7.7 of the geotechnical report). Design and construction of the building shall be engineered to withstand the expected ground acceleration and potential liquefaction that may occur at the Project site. These include, but are not limited to:

- Continuous footings shall be designed for an allowable bearing capacity of 2,500 pounds per square foot (psf), and a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- Isolated spread foundations shall be designed for an allowable bearing capacity of 3,000 psf, and a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.
- The allowable soil bearing pressure above shall be increased by 300 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum bearing pressure of 5,000 psf.
- The allowable bearing pressures shall be increased by one-third for transient loads due to wind or seismic forces.
- Continuous footings shall be reinforced with a minimum of four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. The reinforcement for isolated spread footings shall be designed by the Project structural engineer.
- For preliminary design purposes 24-, 30-, and 36-inch diameter drilled cast-in-place friction piles have been evaluated. Piles shall be embedded a minimum of 20 feet into the competent alluvium found at and below a depth of 14 feet and derive axial and lateral support exclusively in the undisturbed alluvial soils.
- Casing may be required if caving occurs in the granular soil layers during deep drilled excavation. The contractor shall have casing available and be prepared to use it. If casing is used, extreme care shall be employed so the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than five feet.

Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in the geotechnical report shall be reviewed and revised, if necessary, as part of the structural plan check and building permit process and the LID submittals to the City. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement shall be reevaluated. The City's Building Official shall review and approve the design with any required changes to comply with applicable building and seismic regulations at the time of the construction plan submittal.

Geology PDF 2 – Geotechnical Project Design Features for Foundation Construction

The recommendations for foundation construction contained in the 2016 geotechnical report would be implemented as Project Design Features that include, but are not limited to, the following:

Shoring Design

All recommendations presented in the geotechnical report pertaining to the shoring design considerations shall be followed. Soldier piles, lagging, and tie backs shall be designed to withstand the earth pressure resulting from adjacent soils, traffic loading, and temporary equipment used to excavate the slopes and drive the shoring. For soldier piles driven below the groundwater table, special provisions shall be followed to ensure that caving is minimized. The shoring contractor shall provide its design to the City's Building Official for review and approval prior to commencement of shoring. Lagging deflection and tie back resistance strength shall be measured in the field to ensure that these features are able to withstand the earth pressures that they will undergo.

Foundation Observations

All foundation excavations shall be observed by a City-approved geotechnical engineer to verify penetration into the recommended bearing materials. The observation shall be performed prior to the placement of reinforcement. All foundation pile excavations shall be performed under the continuous observation by City-approved geotechnical engineer to verify penetration into firm undisturbed natural soils. Foundations shall be deepened if necessary to extend into satisfactory soils, or proper compaction shall be performed to ensure that the foundation slab is built upon dense compact material. Foundation excavations shall be cleaned of all loose soils prior to placing steel and concrete. Any required foundation backfill shall be mechanically compacted, flooding is not permitted.

Construction Monitoring

Compliance with the design concepts, specifications or recommendations during construction requires review by City-approved geotechnical engineer. All foundations shall be observed by a City-approved geotechnical engineer prior to placing concrete or steel. Any fill which is placed shall be observed, tested, and verified if used for engineering purposes. It is the responsibility of the contractor to ensure that all excavations and trenches are properly sloped or shored. All temporary excavations shall be cut and maintained in accordance with applicable OSHA rules and regulations.

Geology PDF 3 – Geotechnical Project Design Features if Groundwater is Encountered

Groundwater was not encountered during site exploration, and the groundwater table is sufficient deep that it will not be encountered during pile installation. However, local seepage may be encountered during excavations for the proposed soldier piles, especially if conducted during the rainy season. The recommendations contained in the 2016 geotechnical report in regards to groundwater would be implemented as Project Design Features, which include, but are not limited to, the following:

Tremie Use

If more than six inches of water is present in the bottom of the excavation, a tremie is required to place the concrete into the bottom of the hole. A tremie shall consist of a rigid, water-tight tube having a diameter of not less than six inches with a hopper at the top. The tube shall be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie shall be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end shall be closed at the start of the work to prevent water entering the tube and shall be entirely sealed at all times, except when the concrete is being placed. The tremie tube shall be kept full of concrete. The flow shall be continuous until the work is completed and the resulting concrete seal shall be monolithic and homogeneous. The tip of the tremie tube shall always be kept about five feet below the surface of the concrete and definite steps and safeguards shall be taken to ensure that the tip of the tremie tube is never raised above the surface of the concrete.

Concrete Mix

A special concrete mix shall be used for concrete to be placed below water. The design shall provide for concrete with a strength of 1,000 per square inch over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste shall be included. The slump shall be commensurate to any research report for the admixture, provided that it shall also be the minimum for a reasonable consistency for placing when water is present. Extreme care shall be employed so that the pile is not pulled apart as the casing is withdrawn. At no time shall the distance between the surface of the concrete and the bottom of the casing be less than five feet. Continuous observation of the drilling and pouring of the piles via inspection from a geotechnical engineer appointed by the City’s Building Official.

Hazards PDF 1 – Shallow Soil Remediation

To remediate elevated metals and VOCs, shallow soil will be excavated and properly disposed offsite. The SCMP developed by Leighton (2019) will be implemented to address known and previously unidentified shallow soils impacted by the COPCs referenced in the RP.

The proposed redevelopment will include excavations for one or two-level podium style parking. Excavations will extend up to varying depths across the Project site. Leighton has estimated that approximately 32,000 cubic yards of metal-impacted soil located beneath existing pavement/building slabs in the northwestern central portion of the Project site will require excavation and offsite disposal at a permitted landfill. Excavation of any contaminant-impacted soils in these areas will further reduce threats to groundwater and potential risk to human health. Notably, Cr(VI) contamination in soil identified at specific locations in the HHRA will be removed during excavation activities.

US EPA Residential RSLs have been approved by the LARWQCB for use as cleanup goals for COPCs onsite, with the exception of arsenic. The cleanup goal for arsenic in soil will be 12 mg/kg, established by the DTSC in Determination of a Southern California Regional Background Arsenic Concentration in Soil (2008). If concentrations of COPCs exceed US EPA RSLs and/or hazardous waste criteria, the remedial excavation may be extended.

The profiling of metal-impacted excavated soil will determine whether the soil requires disposal as a non-hazardous waste or a California hazardous waste. Soil excavated from areas of known impacts will be stockpiled and profiled in accordance with the requirements of the selected disposal facility. Leighton indicated that chlorinated VOCs (primarily PCE and TCE) present in shallow soils in this area are considered relatively low and would not prevent soil disposal as a non-hazardous waste.

Prior to the start of excavation, SJ4 will obtain a permit from SCAQMD under Rule 1166. Monitoring using a photoionization detector (PID) or organic vapor analyzer (OVA) will occur every 15 minutes and results recorded during all earth-moving activities. If VOCs are detected at concentrations greater than 50 parts per million by volume (ppmv), soil will be sprayed with water or vapor suppressant and stockpiles shall be covered with plastic sheeting. If PID readings exceed 1,000 ppmv the excavation must stop, the affected area must be sprayed, and the SCAQMD must be immediately notified. Excavated soil containing VOCs at concentrations greater than 1,000 ppmv must be immediately placed in an AQMD-approved sealed container or direct-loaded into trucks. The requirements of the Rule 1166 permit will be adhered to for the duration of the excavation activities.

Under SCAQMD Rule 1466 PM_{10} monitoring will be implemented during all earth moving activities to minimize fugitive dust emissions potentially containing toxic air contaminants. Monitoring will consist of taking continuous direct-reading measurements of particulate matter less than 10 micrometers in diameter. Monitoring equipment will be placed on the upwind and downwind sides of the Project site and will be set to record particulate readings every 10 minutes. If the PM_{10} concentration averaged over two hours exceeds 25 micrograms per cubic meter, the SJ4 contractor shall cease earth-moving activities, apply dust suppressant, or implement other dust control measures until the PM10 concentration is equal to or less than 25 micrograms per cubic meter averaged over 30 minutes.

Observations will be conducted to identify any previously unknown contamination. Soil will be visually monitored during concrete removal and excavation activities by Leighton for the presence of staining and for elevated VOCs using a PID. Soil samples will be collected if evidence of potential contamination is observed. Excavated soil will be profiled for waste disposal.

Confirmation samples will be collected from the sidewalls and floors of the excavations. The sampling frequency will depend on the size of the excavation. In general, samples will be collected from the mid-point of each of the walls and floor, or every 25 linear feet of exposed sidewall at 5-foot depth increments. The floors of each excavation will be sampled at a rate of approximately one sample per 625 square feet. Samples will be analyzed for COPCs and results will be compared to US EPA Residential RSLs. If additional excavation is required beyond the base of the grading plan to achieve the RSLs, the excavated areas will be backfilled with imported clean soil.

US EPA Residential RSLs (US EPA, 2018) have been approved by the LARWQCB for use as cleanup goals for COPCs onsite, with the exception of arsenic. The cleanup goal for arsenic in soil will be 12 mg/kg, established by the DTSC in *Determination of a Southern California Regional Background Arsenic Concentration in Soil* (2008). If concentrations of COPCs exceed US EPA RSLs and/or hazardous waste criteria, the remedial excavation may be extended.

Excavation and characterization of identified and previously unidentified potentially contaminated soil will be conducted under the direction of LARWQCB. If previously unidentified contamination is encountered with a volume greater than a 55-gallon drum, the LARWQCB project manager will be contacted and consulted for proper delineation and removal. A summary report will be prepared following the completion of excavation activities.

If any historical underground features are encountered, including clarifiers, underground storage tanks (USTs), and associated piping, they will be removed under permit and oversight of the appropriate regulatory agency.

If stained soil is observed in the locations of the former transformers soil samples will be collected and analyzed for PCBs. If PCBs are detected, proper management and disposal of the PCB-affected soil will be performed. If any oil-stained concrete remains, the concrete will be resampled for the presence of PCBs and if necessary, segregated, profiled, and properly disposed.

Impacts associated with shallow contaminated soil and associated air quality or fugitive dust emissions during excavation, grading, stockpiling or transport of soils will be reduced to less than significant if the SCMP is adhered to and excavation, characterization, and disposal of contaminated soil are conducted under the oversight of the LARWQCB and in accordance with applicable local, State, and Federal regulations, including SCAQMD Rules 402, 403, 1166 and 1466. Furthermore, implementation of these measures is anticipated to mitigate the potential for exposure to offsite commercial or residential receptors, including during transport of excavated soil to disposal facilities.

Hazards PDF 2 – Shallow Soil Vapor

Engineering controls will be installed beneath the building foundations to prevent the migration of VOCs in shallow soil vapor into the proposed buildings. Engineering controls proposed in Geosyntec's Response Plan include the following:

Vapor Barrier and Venting System

Vapor barriers and venting systems will be installed as engineering controls beneath foundations of at-grade parking structures located beneath residences and beneath and around below-grade structures. The locations of the vapor barrier systems are illustrated on Drawings 2 through 4 of the RP. The vapor barrier systems beneath foundations will consist of, from top to bottom, a concrete slab underlain by a minimum 30-mil vapor barrier, followed by a cushion geotextile and/or 2 inches of sand to prevent puncture, followed by a vapor collection layer consisting of a minimum of 4-inch aggregate or geocomposite. Perforated venting pipes will be installed within the aggregate, or a strip composite venting layer will be placed immediately above the subgrade. The horizontal pipes will be connected to vertical solid vent pipes which will extend through the building to a minimum of 10 feet above grade and a minimum of 10 feet from any air inlet or operable door or window. A monitoring point will be installed within each vent riser.

The system will initially operate passively, and wind-driven turbines will be added to select vent risers to enhance venting. The venting system shall be equipped with blowers, and could therefore become an active system, if the indoor air or sub-slab VOC concentrations increase and additional engineering controls are deemed necessary or required by the LARWQCB.

The walls of below-grade structures will have a minimum 30-mil vapor barrier resistant to COPCs between the concrete walls and the subgrade soil. Cushion geotextiles and/or 2-inches of sand will be placed between the vapor barrier and surrounding soil to prevent puncture.

At-grade occupied, enclosed structures may consist of lobbies, elevators, or commercial space. Engineering controls for at-grade occupied, enclosed structures will include aerated floors such as Cupolex®. The aerated floor system will consist of, from top to bottom, a concrete slab, aerated forms, and prepared subgrade. The void space beneath the structures will be connected to vent pipes. Vent pipes will ventilate a minimum of 10 feet above grade and a minimum of 10 feet from any air inlet and/or operable door or window. A minimum of 2 ventilation pipes will be provided per enclosed continuous structure. A monitoring point will be installed within each vent riser.

At-grade, open parking garages will be constructed with a podium-style design incorporating natural ventilation meeting the requirements of 24 CCR Chapter 4 Section 406.5.2. The exterior side of the structure will have uniformly distributed openings on two or more sides that will not be less than 20 percent of the total perimeter wall area of the ground-level tier. The total length of the openings will not be less than 40 percent of the ground-level tier. Interior walls will have uniformly-spaced openings which will be a minimum 20 percent open, however size of openings may be modified if HVAC controls are implemented in the structure to provide enhanced ventilation.

Operation, Maintenance, and Monitoring

An Operation, Maintenance, and Monitoring (OMM) plan will be developed and submitted to the LARWQCB concurrently with the final Design Report detailing elements of the remedial design. The OMM plan will detail the methods for monitoring the vapor barrier and venting system and will provide monitoring frequencies and maintenance procedures for the system components. Furthermore, the OMM plan will include details of post construction indoor air monitoring for COPCs addressed in the RP in a manner that will comply with LARWQCB requirements and applicable State laws and guidance for the evaluation and mitigation of subsurface vapor intrusion to indoor air.

Further details regarding the vapor barrier and venting system details are provided in Section 7 of the RP prepared by Geosyntec. The engineering controls will be recorded as part of an administrative deed restriction for the Project site. The deed restriction will be provided to the LARWQCB when finalized.

According to the DTSC's Vapor Intrusion Mitigation Advisory, 2011, subslab venting is one of the most commonly accepted mitigation techniques and has a successful track record of performance. Utilization of a subslab liner aids in venting the sub-slab soil gas via collecting pipes rather than upward into the building and provides protection in the event that the blower fails on a depressurization system. The advisory further states that the risk from vapor intrusion may be greatly reduced through the use of podium-style buildings. Impacts associated with residual VOCs in shallow soil vapor will be reduced to less than significant provided that the following is implemented:

- The Response Plan is approved by and implemented under the direction of the LARWQCB.
- A vapor barrier and venting system, along with aerated flooring beneath certain at-grade occupied areas are implemented in accordance with the RP.
- The OMM plan is followed, including post-construction indoor air monitoring.

Hazards PDF 3 – Deep Soil and Soil Vapor Remediation

An SVE system will be operated to remove VOCs in deep soil and soil vapor to the extent feasible and practicable. SVE will be implemented for the remediation of deep soil and soil vapor to remove mass and reduce the potential for migration of VOCs to underlying groundwater to protect current and potential beneficial uses. It should be noted, however, that offsite sources of contamination continue to affect groundwater in the vicinity of the Project site. Therefore, impacts to groundwater will be reduced to the extent feasible and practicable and may not be quantifiable, given the potential continued contamination of the aquifer from offsite sources.

Components of the SVE system will be installed following excavation and rough grading at the Project site. The system will consist of 16 new SVE wells connected to a skid-mounted SVE package system equipped with granular activated carbon vessels. The SVE system will be installed on the upper level of the parking structure. Soil vapor probes will be installed in the vadose zone at various locations throughout the Project site, and subslab probes will be installed in the parking structure. Eight previously installed deep nested soil vapor probes may also be incorporated into the monitoring network.

Further details regarding location, installation, operation, and monitoring of the SVE system are provided in Section 6.3 of the RP. Detailed design plans for the remediation system were not provided in the RP. Once design plans are finalized they will be submitted to the LARWQCB for review and approval.

According to the DTSC's Proven Technologies and Remedies Guidance – Remediation of Chlorinated VOCs in Vadose Zone Soil (2010), SVE is the most frequently selected remedial alternative for chlorinated VOCs, such as PCE and TCE, in vadose zone soil. The effectiveness of SVE was determined by DTSC based on engineering and scientific analysis of performance data from past State and Federal cleanups and review of the administrative records and procedures used to implement the technologies.

Impacts associated with potential vapor migration to indoor air by residual VOCs in deep soil and soil vapor will be reduced to less than significant, provided that the following occurs:

- SVE is implemented under the direction of the LARWQCB and is conducted in conjunction with engineering controls for shallow soil vapor.

Hazards PDF 4 – Abandoned Oil Pipeline

The abandoned oil pipeline is reportedly owned by ExxonMobil and traverses the southeastern portion of the property. According to the SCMP, ExxonMobil will prepare a workplan and will be responsible for the proper removal of the pipeline. The pipeline will be removed under the oversight of SJ4's environmental consultant in accordance with the workplan, as approved by the LARWQCB.

Impacts associated with the abandoned ExxonMobil pipeline will be reduced to less than significant provided that the following is implemented:

The abandoned oil pipeline is properly removed in accordance with all applicable local, State, and Federal regulations, in accordance with a workplan approved by the LARWQCB, and under the oversight of SJ4's environmental consultant; and

- Any previously unidentified releases from the abandoned pipeline will be handled in accordance with the SCMP and/or an LARWQCB-approved workplan for the pipeline removal.

Hydrology PDF 1 – Low Impact Development Plan

Per the requirements of the MS4 Permit, a Low Impact Development (LID) Plan has been developed by the Project applicant and will be submitted to the City of Burbank Community Development Director or his/her designee for approval. The LID Plan is required because the Project would result in an alteration to 50 percent or more of the impervious surfaces of a previously existing development that was not subject to post-construction stormwater quality control requirements. Therefore, the Project is classified as a "Planning Priority Project" per the Burbank Municipal Code (BMC) and must comply with requirements of BMC Section 9-3-413, which states all stormwater runoff generated at the Project site must be treated. The LID Plan is designed to control pollutants, pollutant loads, and runoff volumes to the maximum extent feasible by minimizing impervious surface areas and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use. Since infiltration of stormwater runoff onsite was determined to be infeasible due to groundwater contamination, the LID plan details how the Project will include Filterra systems sized to treat 1.5 times the 85th percentile, 24-hour rain event. In addition to treating stormwater runoff the LID Plan details source control BMPs that will be implemented onsite to reduce the potential for water quality degradation. These include storm drain messages and signing, locating trash away from roof drainage, minimization of run-on to the loading docks, and installation of irrigation that minimizes dry weather urban runoff. The Project must also protect slopes and channels and provide proof of ongoing BMP maintenance.

Hydrology PDF 2 – Soil Management Plan

The Project site was investigated for potential groundwater and soil contamination under the Well Investigation Program as part of the San Fernando Valley Groundwater Basin Superfund Site. The Project site lies within the Burbank Operable Unit. As a result of these past uses, there is a potential that construction activities could uncover previously contaminated soils. Thus, the Project applicant has developed a Soil Management Plan (SMP) that outlines the framework for soils assessment, remediation, and removal actions to be undertaken if contaminated soils are encountered during construction activities. This plan will be provided to the City as part of the documents prior to issuance of building permits. As grading, excavation and trenching are performed, exposed soil would be monitored for stained or discolored soil, wet or saturated soils, or odors. If impacted soil is encountered, the soil would be analyzed to identify and characterize the impact and determine if soil remediation is required. Based on visual monitoring, “grab” soil samples would be collected at selected locations for headspace screening for volatile organic compounds using a calibrated Photoionization Detector (PID). Headspace PID readings that are elevated above those of non-impacted grab soil samples would be considered potentially contaminated.

Soil impacted by highly elevated concentrations of hexavalent chromium and/or total chromium may appear to be stained a yellow color, dissimilar to surrounding non-impacted soil. At a minimum, at least one soil sample would be collected for chemical analysis at or near the center of the suspected impact, ideally representative of the “worst case” condition. Soil samples would be analyzed by an appropriate State-certified laboratory using appropriate methods based on the parameters to be analyzed. The extent of lateral and vertical effects will be characterized where applicable. Likely excavation of impacted soil would be followed by segregated stockpiling or direct-loading, waste profiling, and off-site disposal or recycling which would be performed in accordance with applicable Federal, State, and local regulations.

Land Use PDF 1 – Master Sign Program

Prior to issuance of any building permit for Phase 1, the Developer shall submit a Master Sign Program to the CDD at the time of Plan Check review. The master sign program shall indicate maximum allowable signage permitted per street frontage, signage type(s) and locations proposed, and identify any special characteristics associated with proposed signs. The comprehensive sign program is subject to approval by the CDD Director or his/her designee.

1. As part of the master sign program, the Developer shall provide a sign plan for the residential and commercial portions of the parking garages. The plan shall indicate all wayfinding signs, including colors of paint used to indicate presence of parking stalls and elevator vestibules.

2. Revisions to the comprehensive sign program may be approved by the CDD Director or his/her designee with a standard sign permit if the intent of the original approval is not affected. Revisions that would substantially deviate from the original approval shall require the approval of a new comprehensive sign program by the CDD Director.
3. Each primary building entry for the residential portions of the project shall have no more than one major sign, and the sign shall be designed to be compatible with the structure's architectural design theme.
4. Other than permanent signs, advertising shall cover no more than 25 percent of the windows of the commercial spaces facing all public streets, or otherwise placed on the interior or exterior of the business with the intent of being visible from a public street. No additional window advertising will be permitted unless approved as a part of the Master Business Sign Program.

Noise PDF 1 – Operation and Maintenance

- Hours of operation for the commercial tenant spaces shall be limited to between 6:00 a.m. and 12:00 a.m. (midnight). Late night businesses and/or operations (including deliveries) shall be prohibited, unless otherwise approved in accordance with the BMC. The owner/operator of the Project shall be responsible for providing a written notice to all residents that they are located in a mixed-use development adjacent to retail and commercial land uses, and the residents could be affected by noise from adjacent uses.
- No exterior maintenance of the premises, including but not limited to lot sweeping and cleaning, landscaping and gardening, or washing of sidewalks shall be conducted on the premises before 7:00 a.m. or after 10:00 p.m. Monday through Saturday or before 9:00 a.m. or after 8:00 p.m. on Sunday.
- Any noise resulting from the operation of the business or conduct of the patrons, including the playing of musical instruments, whether live or mechanical, singing or other vocal sounds shall be kept at a level so as not to cause any disturbances or nuisances that would be detrimental to other properties in the area or to the welfare of the occupants thereof.

Noise PDF 2 – Sound Wall

The developer shall construct a Sound Wall located on either California Department of Transportation (Caltrans) right-of-way or on the Project site and City right-of-way adjacent to southbound Interstate 5. The northern limits of the Sound Wall shall be a point where the on-ramp to the southbound Interstate 5 is ten (10) feet above the finished grade of the mainline of Interstate 5, and the southern limit shall be a point where the Magnolia Boulevard Bridge intersects with the Caltrans right-of-way boundary.

Unless otherwise required by Caltrans, the Sound Wall shall be built consistent with the California Department of Transportation's "Sound Wall 1584" specifications and shall be a minimum of overall height of not less than ten (10) feet. The final design and construction of the Sound Wall is subject to review and approval by Caltrans (if located on State right right-of-way). If Caltrans does not approve the proposed Sound Wall to be placed on State right-of-way, then the developer shall construct the sound wall on private property and the adjacent City owned property with the final design of the Sound Wall being reviewed and approved by Community Development Director or his/her designee.

2.8 Project Objectives

- Reduce vehicle trips by providing a mixed-use, Transit Oriented Development in close proximity to transit.
- Help meet Citywide housing demand and RHNA requirements through the provision of new, quality living options in the City.
- Enhance linkages to transit by creating a streetscape that encourages pedestrian activity with a widened sidewalk and installing a new bike lane.
- Enhance the value of the site and economic vitality of the City of Burbank through the development of a project at an existing underutilized site that is responsive to market demands.
- Contribute to the economic health of the City though development of a Project that would generate new construction and long-term jobs, house new residents to support local businesses, and provide additional long-term revenues for the City, in the form of transient occupancy and sales taxes.
- Help meet the recreational needs of Project and other residents at no cost to the City by providing publicly accessible, privately maintained open space.

2.9 Required Approvals

The proposed Project would require City approval of the following entitlements:

- Specific Plan Amendment to the Burbank Center Plan to allow residential uses by changing the underlying subarea of the Project site from City Center West to City Center/City Center Access to the Regional Intermodal Transportation Center (RITC).
- Development Review for hotel and residential buildings.
- Rezoning Planned Development (PD) zone and Zone Map Amendment to change the zoning from Auto Dealership (AD) to Planned Development (PD).
- Development Agreement between the City and the Project applicant.
- Tentative Tract Map
- Purchase and Sale Agreement to sell adjacent City property to the Project applicant.
- Approval of associated building and engineering permits and pay applicable development fees to facilitate the creation of open space and pedestrian access to and from Downtown Burbank to the Project site view a new pedestrian bridge and elevator.

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4.2 Air Quality

This section analyzes the effects of the Project on air quality. This section analyzes both temporary impacts relating to construction activity and possible long-term impacts associated with Project operation. The analysis herein is based partially on data from the *Transportation Impact Analysis for the 777 North Front Street Project* prepared by Fehr & Peers (F&P) dated March 2019 that is included as Appendix J of the EIR. Greenhouse gas and global climate change impacts are discussed in Section 4.5, *Greenhouse Gas Emissions.* The *777 North Front Street Project Health Risk Assessment (HRA)* prepared by Air Quality Dynamics dated June 2017, is included as Appendix C, and the Air Quality and Greenhouse Gas Emission Study prepared by Rincon is included as Appendix D.

4.2.1 Setting

a. Local Climate and Meteorology

The Project site is in the South Coast Air Basin (Basin or SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego County line to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as the San Gorgonio Pass area in Riverside County. The regional climate in the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles and other modes of transportation, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

b. Air Quality Regulation

The federal and State governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent under the California EPA. County-level Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs/AQMDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide, including the SCAB.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (CAAQS) for these and other pollutants, some of which are more stringent than the federal standards.

The South Coast Air Quality Management District (SCAQMD or District) is the designated air quality control agency for the Basin. The Basin is designated a nonattainment area for the federal and State one-hour and eight-hour ozone standards, the State PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, and the State and federal annual $PM_{2.5}$ standard. The Basin is in attainment of all other federal and State standards. Table 4.2-1 provides the federal and State ambient air quality standards.

Table 4.2-1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	N/A[1]	0.09 ppm[2]
	8-Hour	0.070 ppm	0.070 ppm
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	Annual	0.03 ppm	N/A
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	N/A	20 µg/m[3]
	24-Hour	150 µg/m	50 µg/m
$PM_{2.5}$	Annual	12 µg/m	12 µg/m
	24-Hour	35 µg/m	N/A
Lead	30-Day Average	N/A	1.5 µg/m
	3-Month Average	0.15 µg/m	N/A

[1] N/A: Not applicable because no standard is currently established for California
[2] ppm = parts per million
[3] µg/m = micrograms per cubic meter
Source: CARB 2016

Characteristics of ozone, CO, NO_2, and suspended particulate matter are described below.

Ozone

Ozone (O_3) is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG).[1] NO_X is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it mostly occurs in substantial concentrations 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 O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant that is found in high concentrations only near the source. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) 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_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 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_{10} and acid rain.

Suspended Particulates

PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ 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 ($PM_{2.5}$) 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

[1] 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, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

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.

Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The 2016 AQMP, adopted on March 3, 2017, incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015.

The 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models (SCAQMD 2017). This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also includes attainment demonstrations of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements.

c. Current Ambient Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the Basin. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The monitoring station located closest to the Project site is the Los Angeles-North Main Street station approximately 9.5 miles southeast of the Project site. Table 4.2-2 indicates the number of days that each of the standards has been exceeded at that station.

As shown in Table 4.2-2, the eight-hour ozone concentration exceeded both State and federal standards on six days in 2015, four days in 2016, and 14 days in 2017. The ozone concentration exceeded State one-hour standards on two days in both 2015 and 2016, as well as six days in 2017. The $PM_{2.5}$ concentration exceeded standards on seven days in 2015, two days in 2016, and six days in 2017. No exceedances of federal standards for NO_2 or PM_{10} have occurred at the monitoring station in the last three years; however, the State PM_{10} standard was exceeded 30 times in 2015, 21 times in 2016, and 40 times in 2017.

Table 4.2-2 Ambient Air Quality at the Monitoring Station

Pollutant	2015	2016	2017
8 Hour Ozone (ppm), 8-Hr Maximum	0.074	0.078	0.086
Number of Days of State exceedances (>0.070)	6	4	14
Number of days of Federal exceedances (>0.070)	6	4	14
Ozone (ppm), Worst Hour	0.104	0.103	0.116
Number of days of State exceedances (>0.09 ppm)	2	2	6
Number of days of Federal exceedances (>0.124 ppm)	0	0	0
Nitrogen Dioxide (ppm) – Worst Hour	0.0791	0.0647	0.0806
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of Federal exceedances (0.10 ppm)	0	0	0
Particulate Matter 10 microns, $\mu g/m^3$, Worst 24 Hours	73.0	64.0	64.6
Number of days above Federal standard (>150 $\mu g/m^3$)	0	0	0
Number of days of State exceedances (>50 $\mu g/m^3$)	30	21	40
Particulate Matter <2.5 microns, $\mu g/m^3$, Worst 24 Hours	56.4	44.3	54.9
Number of days above Federal standard (>35 $\mu g/m^3$)	7	2	6

Source: CARB 2018

Note: As of March 15, 2019, 2018 data is not yet available.

d. Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a 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 under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools, hospitals, and residences.

The Project site is primarily surrounded by industrial and commercial uses that are not considered sensitive receptors likely to be affected by air pollutant emissions associated with the Project. The nearest sensitive receptors are multi-family residences at the Burbank Collection Condos, over 750 feet east of the Project site, and single family residences along Scott Road approximately 0.2 mile northwest of the Project site. The next closest receptors include Burbank High School approximately 0.3 mile northeast of the Project site, and the grouping of Downtown Burbank Hotels which include, Holiday Inn, Residence Inn by Marriott, Hilton Garden Inn, and SpringHill Suites by Marriott located approximately 0.4 mile southeast of the Project site. Additional residential uses are also located 0.4 mile west and 0.2 mile southeast of the Project site, and multifamily residences located at 0.2 mile southeast of the Project site.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993) as well as additional guidance published by SCAQMD. The handbook includes thresholds for emissions associated with both construction and operation of the Project. The Project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the Project's land uses, square footages for different uses (e.g., residential, hotel, parking, etc.), and location, to estimate a project's construction and operational emissions from new development. The Project includes developing two mixed-use buildings with 573 residential units and 1,067 sf of retail gallery space, and one mid-rise hotel with 307 rooms and ground floor retail/restaurant uses. Construction of the Project is expected to occur over five years. The entire Project site would be graded and approximately 127,000 cubic yards of soil would be exported from the Project site, as described in Section 2.5.5 of Section 2, *Project Description.*

Construction Emissions Methodology

CalEEMod was used to estimate air pollutant emissions associated with Project construction. Construction activities associated with this development would result in temporary air quality impacts that may vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks), vendor trucks (delivery trucks), and worker vehicles would result in emissions of NO_X, ROC, CO, SO_X, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce ROC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). The Project would also be required to comply with SCAQMD's Rule 403, which requires watering at least twice a day during active operations (e.g., demolition, construction, earth-moving activities, etc.) in order to reduce fugitive dust emissions (Fugitive Dust).

Project emissions were modeled based on a 8.09-acre site with development of two mixed-use residential buildings with 573 residential units, a 1,537 space parking structure, 1,067 square feet (sf) of retail uses, a hotel with 307 rooms with a 1,800 sf high turn-over restaurant, café/bar, swimming pool, fitness center, and a 27,800 square-foot area of publicly accessible open space. Construction of the Project is expected to take approximately 61 months (starting in the beginning of September 2019 and going through the end of September 2025), with full operation assumed to begin in 2026, the first full year after the end of construction. Construction would involve site preparation, grading, excavation, building construction, paving and architectural coating. Demolition was not included as a construction phase as the Project site is currently vacant and does not contain any existing development. However, the existing concrete pad covering the site would be removed and either ground up and used onsite where applicable or exported from the site. Based on applicant provided information, total grading of the Project site, including removal of the concrete pad, would result in approximately 127,000 cubic yards of cut soil that would be exported from the site. Additionally, it was assumed that grading would occur over the entire Project site due to excavation activities required to construct the proposed subterranean parking. Given an estimated haul truck capacity of 16 cubic yards (consistent with the CalEEMod default assumption for truck capacity), approximately 7,938 outbound haul trucks (equivalent to 15,876 total truck trips) would be required for soil export. Approximately 32,000 cubic yards of the total exported soil is conservatively assumed to be contaminated, requiring hauling to Kettleman Hills Landfill, approximately 170 miles from the project site. The remainder of the exported soil (95,000 cubic yards) would be transported to Simi Valley Landfill, approximately 30 miles from the project site. This was incorporated into CalEEMod using a weighted hauling trip length of 65.3 miles for all one-way hauling trips.

Operational Emissions Methodology

CalEEMod was used to estimate air pollutant emissions from mobile sources associated with the Project. CalEEMod default data, including temperature, trip characteristics, variable start information, emission factors, and trip distances, were used for the model inputs. The estimate of vehicle trips associated with the Project is from the *Transportation Impact Analysis* prepared by F&P (Appendix J; also refer to Section 4.12, *Transportation and Traffic*).

CalEEMod was also used to estimate emissions from the Project area sources that include space and water heating, gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for building maintenance. Emissions attributed to energy use include natural gas consumption for space and water heating[2]. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Emissions for the 573-unit apartment buildings and the 307-unit mid-rise hotel were based on CalEEMod defaults.

As discussed in Section 2, *Project Description*, Residential Building 1 would be operational in 2022 and occupied before completion of all construction activities. The operational analysis includes an additional scenario to consider overlap of Residential Building 1 operation, starting in 2022, and construction from 2022 to 2025. For the purposes of this scenario, it was assumed that in addition to the residential units in Building 1 (252 units), the associated parking garage and pool would also be operational.

b. Regional Thresholds

To determine whether a project would have a significant impact to air quality, Appendix G of the CEQA Guidelines questions whether a project would:

1) Conflict with or obstruct implementation of the applicable air quality plan;
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3) 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);
4) Expose sensitive receptors to substantial pollutant concentrations; and
5) Create objectionable odors affecting a substantial number of people.

[2] Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. Therefore, CalEEMod does not calculate a project's operational emissions from consumption of electricity.

The SCAQMD recommends the following quantitative regional significance thresholds for temporary construction activities and long-term project operation within the Basin:

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

c. Localized Significance Thresholds

In addition to regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD 2003). As such, LSTs for operational emissions do not apply to onsite development, as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions in construction areas up to five acres in size. The SCAQMD provides lookup tables for Project sites that measure one, two, or five acres. The Project involves an 8.09-acre disturbance area. As it is unlikely that more than five acres of the site would be under construction on any given day, LSTs for a five-acre Project site were used to provide a more conservative estimate. Because the Project site is located in SRA 7, LSTs for construction in SRA 7 are shown in Table 4.2-3. LSTs are provided for receptors at a distance of 82 to 1,640 feet (at 25, 50, 100, 200, and 500 meters) from the Project site boundary. As discussed in the *Setting*, the closest sensitive receptors are multi-family residences located over 750 feet east of the Project site. A receptor distance of 200 meters (656 feet) was used to provide a more conservative analysis.

Table 4.2-3 SCAQMD LSTs for Construction (SRA-7)

Pollutant	Allowable emissions from a 5-acre site in SRA-7 for a receptor 656 feet away
Gradual conversion of NO_X to NO_2	194
CO	4,119
PM_{10}	84
$PM_{2.5}$	28

Source: SCAQMD 2009

d. Regulatory Requirements and Project Design Features

The Project would comply with all applicable regulatory standards. In particular, the Project would comply with the most current CALGreen Code, in addition to SCAQMD Rules 403 and 1113, and all other applicable provisions of the SCAQMD. Rules 403 and 1113 were added as mitigation in CalEEMod, as discussed below. CALGreen standards include indoor water usage reduction, regulation of outdoor water usage, and construction waste reduction.

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. For the purposes of construction emissions modeling, it was assumed that the project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin. Therefore, the following conditions that would be required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for the 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 onsite 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.
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 onsite 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.

The architectural coating phase involves the greatest release of ROG. The emissions modeling for the proposed Project also includes the use of low-VOC paint (50 grams per liter (g/L) for non-flat coatings) as required by SCAQMD Rule 1113.

In addition, the following project design features (PDF) are proposed with regard to air quality emissions:

Air Quality PDF 1 – CAL Green Building Standards Code

The Project shall incorporate the requirements of the CAL Green Building Standards Code. The Project shall be provided with minimum Tier 1 or LEED Gold certification. The Green Building Plan shall be submitted to the Chief Building Official for review.

Air Quality PDF 2 – Energy Star Appliances

Developer shall install Energy Star or equivalent appliances or equivalent energy-efficient appliance models in new residential units, which shall include a standard-size refrigerator in each unit. Installation of Energy Star or equivalent appliances shall be demonstrated to the satisfaction of the CDD Director prior to issuance of certificate of occupancy.

Air Quality PDF 3 – Air Quality Control Measures

1. Prior to issuance of any building permits for any phase, the Developer shall incorporate the following as project design features in each phase of the Project:
    a. Prior to any building permit (for each phase), the Developer shall install, operate, and maintain an HVAC system that utilizes high-efficiency filters with Minimum Efficiency Reporting Value (MERV) 15 minimum or higher for the residential units.
        i. Developer may prepare and submit an air quality engineering study (for a unit-by-unit analysis) related to the MERV filtration system(s) that must be incorporated into the Project. Individual units may be provided a MERV 13, MERV 14 or MERV 15 (but not less than MERV 13) filtration system depending on the recommendations of the air quality study (i.e., depending on proximity to freeway and exposure levels); developer shall pay for 3rd party air quality expert to review submitted air quality engineering study
        ii. If the Developer elects to not prepare and submit an air quality engineering study (for a unit-by-unit analysis), then a minimum of MERV 15 shall be required for every residential unit in each building/phase.
        iii. HVAC systems with the specified MERV filter ratings are required elements of the Project design, and must be incorporated at the time of original construction.
    b. Locate the air intakes for the residential units as far from the freeway as practicable. Precise location will be ascertained and reviewed during Plan Check prior to issuance of any building permit for each phase.
    c. Provide a written notice to all new residents and tenants that disclose the potential risk from living in close proximity to a freeway, and that opening unit windows may reduce the effectiveness of the air filtration system and increases their individual exposure.

   d. Plant vegetation between residential receptors and the freeway (e.g., rear yard setback areas for each phase).

2. Prior to the issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce the short-term fugitive dust impacts on nearby sensitive receptors.
   a. Prohibit truck idling in excess of five minutes, on-site and off-site;
   b. All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the Project site to prevent excessive amounts of dust;
   c. Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
   d. Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
   e. All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
   f. Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
   g. Gravel bed trackout aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
   h. On-site and unpaved-road vehicle speed shall be limited to 15 miles per hour;
   i. All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized;
   j. Visible dust beyond the property line which emanates from the Project shall be prevented to the maximum extent feasible;
   k. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
   l. Reroute construction trucks away from congested streets or sensitive receptor areas;
   m. Track-out devices shall be used at all construction site access points;
   n. All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
   o. Sweep streets at the end of the day with SCAQMD Rule 1186 and 1186.1 compliant sweepers if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water);
   p. Re-route construction trucks away from congested streets or sensitive receptor areas;
   q. The Project proponent shall survey and document the proposed Project's construction areas and identify all construction areas that are served by electricity. Onsite electricity, rather

than temporary power generators, shall be used in all construction areas that are demonstrated to be served by electricity.

e. Local Regulations

The City of Burbank 2035 General Plan Air Quality and Climate Change Element contains the following goals and related policies specific to air quality:

Goal 1: **Reduction of Air Pollution**

Policy 1.1. Coordinate air quality planning efforts with local, regional, state, and federal agencies, and evaluate the air quality effects of proposed plans and development projects.

Policy 1.2. Seek to attain or exceed the more stringent of federal or state ambient air quality standards for each criteria air pollutant.

Policy 1.3. Continue to participate in the Cities for Climate Protection Program, South Coast Air Quality Management District's (SCAQMD's) Flag Program, SCAQMD's Transportation Programs (i.e., Rule 2202, Employee Rideshare Program), and applicable state and federal air quality and climate change programs.

Policy 1.4. Cooperate with the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and the SCAQMD to measure air quality at emission sources (including transportation corridors), and enforce the provisions of the Clean Air Act, as well as state and regional policies and established standards for air quality.

Policy 1.5. Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air quality and greenhouse gas mitigation in project design.

Policy 1.6. Require measures to control air pollutant emissions at construction sites and during soil- disturbing or dust-generating activities (i.e., tilling, landscaping) for projects requiring such activities.

Policy 1.9. Encourage the use of zero-emission vehicles, low emission vehicles, bicycles, non-motorized vehicles, and car-sharing programs. Consider requiring sufficient convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.

Policy 1.12. Provide public information describing air quality standards, health effects, and efforts that residents and businesses can make to improve regional air quality. Encourage businesses and residents to participate in SCAQMD's public education programs.

Goal 2. Sensitive Receptors

Policy 2.2. Separate sensitive uses such as residences, schools, parks, and day care facilities from sources of air pollution and toxic chemicals. Provide proper site planning and design features to buffer and protect when physical separation of these uses is not feasible.

Policy 2.3. Require businesses that cause air pollution to provide pollution control measures.

Policy 2.4. Reduce the effects of air pollution, poor ambient air quality, and urban heat island effect with increased tree planting in public and private spaces.

Policy 2.5. Require the use of recommendations from the California Air Resources Board's Air Quality and Land Use Handbook to guide decisions regarding location of sensitive land uses.

Threshold 1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 THE PROPOSED PROJECT WOULD INTRODUCE ADDITIONAL HOUSING TO THE AREA AND CONTRIBUTE TO POPULATION GROWTH. HOWEVER, GROWTH WOULD BE CONSISTENT WITH THE GROWTH ASSUMPTIONS IN THE AIR QUALITY MANAGEMENT PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

A project may be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region's attainment of air quality standards, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP incorporates local city general plans and the Southern California Association of Government's (SCAG) 2016 RTP socioeconomic forecast projections of regional population, housing and employment growth.

The proposed Project involves the construction of a mixed-use residential development which would cause a direct increase in the City's population. The proposed Project would also involve development of a hotel, which would not directly increase the City's population as the purpose of this facility is to temporarily house visitors and would not generate permanent residents. However, operation of the hotel would require hiring employees. Although staff would likely come from the existing labor force, it is possible that all staff members would be newly generated employees, which would contribute to the City's regional employment growth. According to data provided to the City by the California Department of Finance (DOF), the current population of the city is 107,149, and the average household size is 2.5 persons (DOF 2018). In result, development of 573 residential units would generate approximately 1,433 new residents (573 dwelling units x 2.5 residents/dwelling unit). According to the SCAG Employment Density Study Summary, hotels in Los Angeles County have an average of 51.91 employees per acre of floor area and commercial developments have an average of one employee per 424 square feet of floor area (SCAG 2001). Based on these averages, the hotel would generate about 244 employees and the gallery would generate about three employees. The total estimated number of employees associated with the proposed Project is therefore 247. It is assumed that not all employees would become new residents of Burbank (they may, for example, already live in the City or live outside of the City after they are hired). According to SCAG's 2016 RTP/SCS, the City's population is forecasted to increase to approximately 118,700 by 2040, which is an increase of 13,667 persons from the current population (SCAG 2016). The addition of 1,433 residents in the Project area would constitute about 11 percent of the City's total projected population growth. For employment within the City, SCAG's 2017 Local Profiles Report for the City of Burbank estimated the City's total jobs to be 112,656 in 2015, and estimates an increase to 145,000 jobs in 2040 in their 2016 RTP/SCS forecasts. Thus, employment is expected to increase by approximately 29 percent (32,344 employees) between 2015 and 2040 (SCAG 2017). The possible addition of 247 new employees would comprise approximately one percent of this increase. Therefore, employment growth generated by the proposed Project would be within the SCAG 2016 employment growth forecasts. Because the proposed Project would not directly generate substantial population growth, and possible employment growth would be within SCAG regional growth projections, the proposed Project would not conflict with the AQMP.

Mitigation Measures

No mitigation measures would be required.

Threshold 2:	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact AQ-2 CONSTRUCTION OF THE PROPOSED PROJECT WOULD RESULT IN TEMPORARY GENERATION OF AIR POLLUTANTS, WHICH WOULD AFFECT LOCAL AIR QUALITY. SHORT-TERM EMISSIONS, INCLUDING CO, PM_{10}, $PM_{2.5}$, AND ROG WOULD NOT EXCEED SCAQMD REGIONAL OR LST THRESHOLDS. NO_X WOULD EXCEED THE SCAQMD THRESHOLD WITHOUT PROPER MITIGATION. THEREFORE, THIS IMPACT IS LESS THAN SIGNIFICANT WITH IMPLEMENTATION OF THE PROPOSED MITIGATION MEASURE.

Construction emissions are generally referred to as temporary impacts of a project, but have the potential to represent a significant impact with respect to air quality. Fugitive dust emissions are among the pollutants of greatest concern with respect to construction activities. These emissions from construction activities can lead to adverse health effects and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. General site grading operations are the primary sources of fugitive dust emissions. However, these emissions can vary greatly, depending on the level of activity, the specific operations taking place, the number and types of equipment operated, vehicle speeds, local soil conditions, weather conditions, and the amount of earth disturbance from site grading and excavation.

Emissions of ozone precursors NO_X and ROG are primarily generated by the operation of off-road construction equipment and mobile sources such as delivery vehicles and construction worker vehicles. Generation of these emissions vary as a function of the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation, as well as vehicle trips per day associated with delivery of construction materials, the export of soil, vendor trips, and worker commute trips.

Based on the CalEEMod results for the proposed Project, Table 4.2-4 summarizes the estimated maximum daily emissions of pollutants during the construction period with compliance with of the requirements described above for Rules 403 and 1113, but without any additional mitigation.

Table 4.2-4 Estimated Construction Emissions

	Maximum Emissions[1] (lbs/day)				
Construction Year	**ROG**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2019 Maximum	5.7	160.3	53.9	38.1	11.5
2020 Maximum	5.4	150.2	55.4	17.4	6.3
2021 Maximum	5.0	36.5	52.3	11.0	3.7
2022 Maximum	4.8	35.3	49.7	11.0	3.7
2023 Maximum	13.8	32.3	53.7	12.9	4.2
2024 Maximum	13.6	32.0	51.5	12.9	4.2
2025 Maximum	14.0	43.0	67.1	13.6	4.9
Maximum	**14.0**	**160.3**	**67.1**	**38.1**	**11.5**

SCAQMD Regional Thresholds	75	100	550	150	55
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**
Maximum Onsite	**8.7**	**19.1**	**23.0**	**9.1**	**5.4**
SCAQMD LSTs Thresholds[2]	N/A	194	4,119	84	28
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for calculations. Site Preparation, Grading, Paving, Building Construction, and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features that will be included in the Project.

[1] Grading phases incorporate anticipated emissions reductions, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions, which are required by Rule 1113.

[2] LSTs are for a 5-acre project in SRA-7 within a distance of 200 feet from the site boundary.

As shown above, emissions of CO, PM_{10}, $PM_{2.5}$, and ROG would not exceed SCAQMD regional or LST thresholds, assuming adherence to the conditions listed above required by SCAQMD Rule 403 and SCAQMD Rule 1113. However, maximum daily NO_X emissions generated during Project construction would be approximately 160 lbs/day during construction in 2020, which would exceed SCAQMD thresholds. Therefore, mitigation would be required to reduce maximum daily NO_x emissions to below threshold levels.

Mitigation Measure

Temporary impacts associated with construction-related NO_X emissions would be reduced through implementation of the following mitigation measure.

AQ-2 High Efficiency Truck Engines

All haul trucks used during construction shall have engine model years between 2010 and 2018 to ensure that all truck engines have higher average total fuel efficiency.

Significance After Mitigation

Mitigation Measure AQ-2 requires the use of hauling trucks with engines having higher average total fuel efficiency. Using engine emission factors provided on the CARB EMFAC Web Database, use of recent engine models would result in fewer emissions per mile traveled when transporting exported soil, therefore yielding lower daily NO_X emissions. Using heavy duty truck engines with model years 2010 through 2018 would reduce maximum daily NO_X emissions associated with hauling by approximately 80 lbs/day during the worst day from 145 lbs/day to 65 lbs/day (see calculation details in Appendix D). The combined maximum daily construction emissions on the worst day for offsite emissions sources, including hauling, and onsite sources would be 80 lbs/day of NO_X, which would be below the threshold of 100 lbs/day of NO_X. Because implementation of Mitigation Measure AQ-2 would reduce NO_x emissions to be below SCAQMD thresholds, residual impacts would be less than significant. In addition, implementation of Mitigation Measure AQ-3 below, which requires implementation of Tier 4 construction equipment for all construction activities that overlap with building occupancy, would further reduce NO_X emissions during construction activities.

Threshold 2:	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact AQ-3 OPERATIONAL EMISSIONS ALONE WOULD NOT EXCEED SCAQMD'S DAILY SIGNIFICANT THRESHOLDS. HOWEVER, NO_X EMISSIONS DURING POTENTIALLY OVERLAPPING CONSTRUCTION PHASES AND OPERATION OF BUILDING 1 WOULD EXCEED SCAQMD'S OPERATIONAL THRESHOLD. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH IMPLEMENTATION OF THE PROPOSED MITIGATION MEASURE.

Long-term operational emissions associated with the Project are those attributed to vehicle trips (mobile emissions), the use of natural gas and electricity (energy source emissions), and consumer products, architectural coatings, and landscape maintenance equipment (area source emissions). CalEEMod was used to calculate emissions based on the proposed land uses for the Project site and the number of trips generated.

Table 4.2-5 summarizes the Project's operational emissions. The majority of Project-related operational emissions would be due to vehicle trips to and from the Project site.

Table 4.2-5 Estimated Operational Emissions

	Estimated Emissions (lbs/day)					
Emissions Source	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Area	20.4	0.5	47.4	<0.1	0.3	0.3
Energy	0.3	3.1	1.9	<0.1	0.2	0.2
Mobile	8.3	38.5	102.9	0.4	40.7	11.1
Project Total	29.1	42.1	152.2	0.4	41.2	11.6
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix D for CalEEMod computer model output. Note: Numbers may not add due to rounding.

As shown in the Table 4.2-5, Project-generated emissions would not exceed SCAQMD recommended thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. Therefore, impacts would be less than significant.

As discussed in Section 2, *Project Description*, Residential Building 1 would be operational in 2022 and occupied before completion of all construction activities. Therefore, this operational analysis also considers overlapping emissions from operation and construction in years 2022 through 2025, as summarized in Table 4.2-6.

Table 4.2-6 Estimated Overlapping Operation and Construction Emissions between 2022 and 2025

Year	Estimated Emissions (lbs/day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2022	14.6	50.5	108.4	0.3	23	7.1
2023	23.6	47.5	112.4	0.3	24.9	7.6
2024	23.4	47.2	110.2	0.3	24.9	7.6
2025	23.8	58.2	125.8	0.3	25.6	8.3
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**	**No**

See Appendix D for CalEEMod computer model output. Note: Numbers may not add due to rounding.

As shown in the Table 4.2-6, Project-generated emissions in years when construction and operation of Building 1 overlap would not exceed SCAQMD recommended thresholds for ROG, CO, SO_X, PM_{10}, or $PM_{2.5}$. However, maximum daily NO_X emissions during overlapping construction and operation of Building 1 would exceed SCAQMD operational thresholds in 2025. Therefore, mitigation would be required to reduce maximum daily NO_X emissions to below threshold levels.

Mitigation Measures

Temporary impacts associated with NO_X emissions from overlapping construction phases and operation of Building 1 would be reduced through implementation of the following mitigation measure.

AQ-3 NO_x Reduction from Combined Operational and Construction Emissions

All off-road diesel-powered construction equipment shall meet or exceed the CARB and U.S. EPA Tier 4 off-road emissions standards for equipment rated at 50 horsepower or greater during construction activities that overlap with building occupancy. Contractors shall demonstrate the ability to supply compliant equipment for review and approval by the City prior to the commencement of any construction activities and issuance of building occupancy permits. A copy of each unit's certified tier specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. If use of Tier 4 construction equipment is not feasible, the contractor shall provide evidence that Tier 4 construction equipment is not feasible and shall provide a report to the City for review and approval, demonstrating that other technologies/strategies would reduce emissions from overlapping construction and operational phases to below SCAQMD's operational thresholds. Alternative applicable strategies may include, but would not be limited to, Tier 3 construction equipment, reduction in the number and/or horsepower rating of construction equipment, limiting the number of daily construction haul truck trips to and from the Project, and/or limiting the number of individual construction project phases occurring simultaneously, if applicable. If it cannot be demonstrated that emissions during construction activities that overlap with building occupancy would not exceed SCAQMD's operational thresholds, then building occupancy shall be delayed until all construction activities are complete.

Significance After Mitigation

Mitigation Measure AQ-3 requires the use of Tier 4 construction equipment during construction activities that overlap with building occupancy or implementation of alternative strategies to ensure that emissions during overlapping operational and construction phases do not exceed SCAQMD operational thresholds. As shown in Table 4.2-7, implementation of Tier 4 construction equipment during construction activities that overlap with building occupancy would reduce combined emissions during overlapping construction and operational phases to below SCAQMD's operational thresholds. Delaying building occupancy until all construction activities are completed would prevent overlapping construction and operational phases and the associated potential exceedance of SCAQMD thresholds. With implementation of Mitigation Measure AQ-3, residual impacts would be less than significant.

Table 4.2-7 Estimated Overlapping Operation and Construction Emissions between 2022 and 2025

	Estimated Emissions (lbs/day)					
Year	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2022	14.2	38.5	108	0.3	22.2	6.2
2023	23.2	34.3	112	0.3	23.9	6.7
2024	23	34	109.8	0.3	23.9	6.7
2025	23.2	34.9	125.4	0.3	24.1	6.8
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix D for CalEEMod computer model output. Note: Numbers may not add due to rounding.

Threshold 3: Would the project result in a cumulatively considerable net increase of criteria pollutant for which the project region is non-attainment under applicable federal or State ambient air quality standard (including releasing emissions which exceed qualitative thresholds for ozone precursors)?

Impact AQ-4 THE PROPOSED PROJECT WOULD NOT DEGRADE SERVICE LEVELS AT STUDY AREA INTERSECTIONS SUCH THAT CARBON MONOXIDE (CO) HOTSPOTS WOULD BE CREATED. IMPACTS RELATED TO CO HOTSPOTS WOULD BE LESS THAN SIGNIFICANT.

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

According to traffic volumes in the *Transportation Impact Analysis* prepared by F&P for the closest intersection to the Project site, the daily traffic count for the Front Street/Burbank Boulevard intersection is approximately 51,180 vehicles. The Project would add approximately 3,460 daily trips to this intersection, resulting in approximately 54,640 daily vehicles (F&P 2019). Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there would be more vehicle trips under the Project than under existing conditions, Project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO.

In addition, the Bay Area Air Quality Management District (BAAQMD) has established a screening threshold. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). The trips generated by the Project would be well below the threshold and would not cause the intersection to host 100,000 vehicles per day, which was the level of traffic at the worst case intersection analyzed by SCAQMD in the 2003 AQMP that also did not result in a CO impact. Localized air quality impacts related to CO hot spots would therefore be less than significant.

Mitigation Measures

No mitigation measures would be required.

Threshold 4:	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-5 **THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS ASSOCIATED WITH CONSTRUCTION DUST OR TOXIC AIR CONTAMINANTS. IMPACTS RELATED TO THESE LOCATED POLLUTANTS WOULD BE LESS THAN SIGNIFICANT.**

Construction Dust

As described under Impact AQ-2, Project construction emissions would not exceed SCAQMD or LST daily thresholds, with implementation of the proposed mitigation measure. The nearest existing sensitive receptors to the area proposed for construction include multi-family residences at the Burbank Collection Condos over 750 feet east of the Project site, single-family residences approximately 0.2 mile northwest of the Project site along Scott Road, Burbank high school approximately 0.3 mile northeast of the Project site, and the Hilton Burbank hotel approximately 0.4 mile southeast of the Project site, as discussed under Sensitive Receptors in Section 4.2.1, *Setting*. To provide a more conservative analysis, LSTs used in this analysis considered a receptor distance of 656 feet (200 meters), although the nearest sensitive receptor is over 750 feet from the Project site.

As shown in Impact AQ-2, the highest daily PM_{10} emissions associated with Project construction would not exceed the SCAQMD's threshold of 150 pounds per day or the SCAQMD's LST threshold of 84 pounds per day. Likewise, the highest daily $PM_{2.5}$ emissions associated with Project construction would not exceed the SCAQMD's threshold of 55 pounds per day or the SCAQMD's LST threshold of 28 pounds per day. This estimate for PM_{10} emissions included the following assumptions, compliant with the SCAQMD Rule 403, during site preparation and grading phases of construction (as shown in Section 4.2.2, *Impact Analysis*):

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 onsite 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.
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 onsite driveways and adjacent streets and roads at least once per day, preferably

Therefore, the Project would have a less than significant impact on sensitive receptors.

Toxic Air Contaminants (TACs)

The greatest potential for toxic air contaminants (TAC) emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. “Individual Cancer Risk” is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 61 months, approximately five years, the Project would not result in a long-term (i.e., 70-year) source of TAC emissions. Moreover, a comparison of onsite construction emissions to SCAQMD-recommended local significance thresholds (LSTs) is the appropriate method for evaluating localized air quality impacts from construction, as was completed under Impact AQ-2. LSTs represent the maximum emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. To provide a more conservative analysis, LSTs used in this analysis considered a receptor distance of 656 feet (200 meters), although the nearest sensitive receptor is over 750 feet from the Project site. As indicated in Table 4.2-4, Project construction emissions would not exceed SCAQMD’s recommended LSTs. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period (61 out of 840 months), existing sensitive receptors would be over 750 feet from construction activities, and the Project’s construction emissions do not exceed SCAQMD-recommended LSTs, impacts associated with construction-related TAC emissions would be less than significant.

In *California Building Industry Association v Bay Area Air Quality Management District*, the California Supreme Court held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of a project (S213478, December 17, 2015). An exception to this general rule is a project that may exacerbate a condition in the existing environment. For such a situation, the lead agency is required to analyze the impact of that exacerbated condition on future residents and users of a project as well as other impacted individuals or resources. For example, a development project could exacerbate hazards relating to wildfire by providing additional fuel and ignition sources, resulting in potential impacts to future residents of the project, existing residents, or resources. Thus, the significance determination with respect to toxic air contaminants focuses on whether the Project would exacerbate environmental conditions in a manner that would increase the potential to expose people or resources to environmental impacts. Because the Project is a mixed-use residential and retail development, Project operation would not generate toxic air contaminants, nor would the Project substantially increase diesel particulates in the area because it would not attract substantial diesel traffic to the Project site, like an industrial warehouse or rest area would. Furthermore, as indicated in Impact AQ-2, emissions of CO, PM_{10}, $PM_{2.5}$, NO_X, and ROG would not exceed SCAQMD's regional thresholds or LSTs during Project construction; therefore, the Project would not exacerbate environmental conditions in a manner that would increase the potential to expose sensitive receptors to environmental impacts.

Air Quality Dynamics prepared a HRA to assess the impact of pollutants on future individuals residing at the Project site (June 2017, Appendix C). The HRA analyzed the possible health effects to future site residents and guests associated with diesel particulate emissions from the adjacent I-5 freeway (see Appendix C). Health risks were quantified for each floor (seven and eight in total). For chronic, annual, and 24-hour exposures, concentration estimates for residential receptors are considered static whereby exposures are assumed to be continuous based upon the averaging time under consideration. For patrons residing at the proposed hotel development, occupancy including extended stay would be limited in duration whereby the 24-hour exposure estimate would apply. Short duration exposures (i.e., one- and eight-hour) apply to all common areas such as a pool and related residential/guest amenities since it is reasonable to assume that an individual could be present for periods of one to eight hours. Reduction of particulate impacts would be accomplished by reducing pollutant concentrations within the building structures. By restricting the rate of infiltration, exposures can be controlled to reduce particulate concentrations below SCAQMD's standards.

Carcinogenic Risks

To represent residential exposures, the assessment employs the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). Specifically, activity patterns for population mobility recommended by the USEPA and presented in the *Exposure Factors Handbook* were utilized. As a result, lifetime risk values for residents were adjusted to account for an exposure duration of 350 days per year for 30 years (i.e., 95th percentile). A 9-year exposure duration was additionally assessed to identify risk estimates associated with the average time individuals are reported to reside at a given residence. These values are consistent with CEQA, which considers the evaluation of environmental effects of proposed projects in a manner that reflects both reasonable and feasible assumptions. For body weight and inhalation, the assessment employed average adult values of 70 kilograms and 20 cubic meters per day, respectively.

Table 4.2-8 and Table 4.2-9 show the maximum predicted residential carcinogenic risk estimates for Residential 1 (the seven-story building) and Residential 2 (the eight story building). As shown in the tables, floor levels two through six for Residential 1 and floor levels three through seven for Residential 2 occupancies exceed the standard of one in one hundred thousand (1.0e-5).

Table 4.2-8 Maximum Residential 1 Receptor/Carcinogenic Risk

	Exposure Scenario	
Floor Level	30 Year	9 Year
2	2.6e-05	7.9e-06
3	2.4e-05	7.3e-06
4	2.1e-05	6.2e-06
5	1.6e-05	4.8e-06
6	1.2e-05	3.5e-06
7	7.9e-06	2.5e-06

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-9 Maximum Residential 2 Receptor/Carcinogenic Risk

	Exposure Scenario	
Floor Level	30 Year	9 Year
3	2.6e-05	7.7e-06
4	2.3e-05	6.9e-06
5	1.9e-05	5.8e-06
6	1.5e-05	4.4e-06
7	1.1e-05	3.2e-06
8	7.6e-06	2.3e-06

Source: Air Quality Dynamics, 2017; see Appendix C

Non-carcinogenic Hazards

The HRA included an evaluation of the potential non-cancer effects of contaminant exposures using the hazard index approach. For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30-and 9-year exposure scenarios (see Appendix C). For acute exposures, the hazard indices for each respective averaging time did not equal or exceed one.

Criteria Pollutant Exposures

As discussed above, the State of California has strict ambient air quality standards for various pollutants. Pollutant emissions are considered to have a significant effect on the environment if they result in concentrations that create either a violation of an ambient air quality standard, contribute to an existing air quality violation, or expose sensitive receptors to substantive pollutant concentrations. For PM_{10} emissions, background concentrations representative of the Project area exceed the California Ambient Air Quality Standards (CAAQS) for the 24-hour and annual averaging times. As a result, a significant impact is achieved when pollutant concentrations produce a measurable change over existing background levels. Although background concentrations exceed the CAAQS annual averaging time for fine particulates, no measurable change criteria currently exists. As a result, the SCAQMD standard of 2.5 μg/m^3 for the 24-hour averaging time is used to assess PM_{10} and $PM_{2.5}$ impacts. Table 4.2-10 through Table 4.2-12 present the maximum predicted concentrations for each identified occupancy and floor level that exceed the particulate significance thresholds.

Table 4.2-10 Maximum Residential 1 Receptor/PM_{10} and $PM_{2.5}$

	Pollutant/Averaging Time		
Floor Level	PM_{10} 24-Hour	PM_{10} Annual	$PM_{2.5}$ 24-Hour
2	11.04772	7.31759	3.58444
3	10.72527	6.84941	3.48039
4	10.21925	5.99178	3.31664
5	9.03814	4.60786	2.93522
6	7.44507	3.23152	–
7	5.82255	2.17110	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-11 Maximum Residential 2 Receptor/PM_{10} and $PM_{2.5}$

	Pollutant/Averaging Time		
Floor Level	PM_{10} 24-Hour	PM_{10} Annual	$PM_{2.5}$ 24-Hour
3	13.73535	9.09714	4.43438
4	13.09213	8.12667	4.22698
5	12.05673	6.46282	3.89339
6	9.96575	4.48692	3.21970
7	7.63241	2.95801	–
8	5.73936	1.97103	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-12 Maximum Hotel Receptor/PM_{10} and $PM_{2.5}$

	Pollutant/Averaging Time	
Floor Level	PM_{10} 24-Hour	$PM_{2.5}$ 24-Hour
3	11.07841	3.56131
4	8.42067	2.70927
5	6.09354	–
6	4.46443	–
7	3.39506	–
8	2.67803	–

Note: Concentrations are expressed in micrograms per cubic meter ((μg/m³). Concentration estimates with receptor heights commensurate with succeeding floor levels will produce lower risk estimates.
Source: Air Quality Dynamics, 2017; see Appendix C

Background concentrations for CO (one-hour and eight-hour averaging times) and NO_2 (one-hour averaging time) are below current air quality standards. As such, significance is achieved when pollutant concentrations add to existing levels and create an exceedance of the CAAQS. The maximum modeled one-hour concentration for CO of 0.31186 parts per million (ppm) (357.13906 $\mu g/m^3$) when added to an existing background concentration of 3.0 ppm, will not cause an exceedance of the CAAQS of 20 ppm. For the 8-hour averaging time, the maximum predicted concentrations of 0.18520 ppm, (212.09453 $\mu g/m^3$) for the residential and 0.16951 ppm, (194.12644 $\mu g/m^3$) for the hotel occupancy when added to an existing background level of 3.0 ppm, does not cause an exceedance of the CAAQS of 9 ppm.

For NO_2, the maximum one-hour concentration of 0.05433 ppm (102.22127 $\mu g/m^3$) was predicted. This concentration, when added to a background concentration of 0.0795 ppm, will not cause an exceedance of the CAAQS of 0.18 ppm.

In conclusion, carcinogenic risks estimates for the 30 year exposure scenario exceed the level posing no significant risk for Residential 1 and Residential 2 receptors located on floor levels two through six and three through seven, respectively. For the nine year exposure scenario, the level posing no significant risk was not exceeded for any receptor location.

For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30 year and nine year exposure scenarios. For short duration exposures, the hazard indices for the identified averaging times did not exceed unity. Therefore, non-carcinogenic hazards were predicted to be within acceptable limits.

Project Design Feature

Impacts associated with chronic, annual and/or 24-hour particulate exposures from diesel exhaust and the re-entrainment of paved roadway dust would be reduced through implementation of Air Quality PDF 3 - Air Quality Control Measures, which would limit particulate infiltration through installation of filtration systems (see the full text under Impact AQ-2). Short duration exposures associated with both toxic and criteria pollutants are below identified significance thresholds. As such, no impacts are anticipated to individuals who reside at the Project site, access common areas, utilize outdoor residential/hotel amenities, and frequent the adjoining open space area.

Table 4.2-13 through Table 4.2-15 list the discrete floor levels and associated filter requirements for the heating, ventilation and air conditioning (HVAC) control equipment. While the effectiveness of filters ranging between MERV 8 and MERV 14 are examined in Table 4.2-13 through Table 4.2-20 below, Air Quality PDF 3 – Air Quality Control Measures requires the installation of filters with MERV 15 minimum or higher efficiency for all residential uses, unless the Developer submit an air quality engineering study with a unit-by-unit analysis that demonstrates MERV 13, 14 or 15 filtration systems would be sufficient to reduce health risks to acceptable levels.

Table 4.2-13 Particulate Filter Efficiencies/Residential 1

Floor Level	MERV Rating
2	≥14
3	≥14
4	≥14
5	≥13
6	≥11
7	≥8

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-14 Particulate Filter Efficiencies/Residential 2

Floor Level	MERV Rating
3	≥14
4	≥14
5	≥14
6	≥13
7	≥11
8	≥8

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-15 Particulate Filter Efficiencies/Hotel

Floor Level	MERV Rating
3	≥10
4	≥9
5	≥8
6	≥7
7	≥6
8	≥5

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-16 through Table 4.2-20 present the carcinogenic risk and particulate concentration reductions associated with the incorporation of the identified MERV filtration efficiencies shown in Table 4.2-13 through Table 4.2-15. For carcinogenic risks, gaseous emissions are not controlled with the above referenced MERV filtration. Therefore, organic gases are considered uncontrolled and weighted against the diesel concentration estimates to produce an overall risk estimate for a given occupancy.

Table 4.2-16 Maximum Residential 1 Receptor / Carcinogenic Risk w/ MERV Filter

Floor Level	Exposure Scenario 30 Year
2	1.0e-05
3	9.3e-06
4	8.0e-06
5	9.5e-06
6	9.9e-06

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-17 Maximum Residential 2 Receptor / Carcinogenic Risk w/ MERV Filter

Floor Level	Exposure Scenario 30 Year
3	1.0e-05
4	9.2e-06
5	7.6e-06
6	8.7e-06
7	8.9e-06

Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-18 Maximum Residential 1 Receptor / PM_{10} and $PM_{2.5}$ w/ MERV Filter

	Pollutant/Averaging Time		
Floor Level	PM_{10} 24 Hour	PM_{10} Annual	MERV Rating
2	0.55236	0.36588	0.35844
3	0.53626	0.34247	0.34804
4	0.51096	0.29959	0.33166
5	0.90381	0.46079	0.44028
6	1.11676	0.48473	–
7	1.74677	0.65133	–

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-19 Maximum Residential 2 Receptor / PM_{10} and $PM_{2.5}$ w/ MERV Filter

	Pollutant/Averaging Time		
Floor Level	PM_{10} 24 Hour	PM_{10} Annual	MERV Rating
3	0.68677	0.45486	0.44344
4	0.65461	0.40633	0.42270
5	0.60284	0.32314	0.38934
6	0.99658	0.44869	0.48296
7	1.14486	0.44370	–
8	1.72181	0.59131	–

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C

Table 4.2-20 Maximum Hotel Receptor / PM_{10} and $PM_{2.5}$ w/ MERV Filter

Floor Level	PM_{10} 24 Hour	$PM_{2.5}$ 24 Hour
3	2.21568	1.78066
4	2.10517	1.76103
5	1.82806	–
6	2.23222	–
7	2.20679	–
8	2.14242	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C

Significance After Mitigation

Impacts would be less than significant. The implementation of the Air Quality PDF 3- Air Quality Control Measures, above, would further reduce particulate matter generated by the operation of the proposed Project.

Threshold 5:	Would the project create objectionable odors affecting a substantial number of people?

Impact AQ-6 **THE PROJECT WOULD NOT CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.**

The CARB *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints. The Project would primarily involve development of two mixed-use residential buildings, a parking structure, a hotel, along with associated open space and landscaping. None of these uses are identified as land uses associated with odor complaints by SCAQMD; therefore, the Project would not generate objectionable odors affecting a substantial number of people.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. As the Project site is in an area without tall buildings to block air movement and hold odors, construction-related odors would disperse and dissipate fairly quickly and would not cause substantial odors at the closest sensitive receptors. In addition, any construction-related odors would be relatively short-term in any event and would cease upon completion of construction. Therefore, impacts related to objectionable odors during construction or operation would be less than significant.

Mitigation Measures

No mitigation measures would be required.

Cumulative Impacts

The planned and pending projects in the vicinity of the Project site, listed in Table 3-1 of this EIR, include 23 projects consisting of retail, restaurant, residential, office, industrial, hotel, school airport and transportation related land uses. Projects that are within the vicinity of the Project site include First Street Village Mixed-Use Project (Related Project No. 6), Premier at First Street Mixed-Use Project (Related Project No. 7), Burbank Town Center Redevelopment Project (Related Project No.

10), Olive Station Mixed-Use Project (Related Project No. 14) and Burbank Common Project (Related Project No. 15).

The Basin is designated a nonattainment area for the federal and State one-hour and eight-hour ozone standards, the State PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, and the State and Federal annual $PM_{2.5}$ standard. The Basin is in attainment of all other federal and State standards. Any growth in the Los Angeles metropolitan area could have the potential to contribute to the existing exceedances of ambient air quality standards when taken as a whole with current development. The SCAQMD's approach to determining whether a project's emissions of criteria air pollutants are cumulatively considerable is to first determine whether or not the proposed Project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the proposed Project does not generate emissions exceeding SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects only if the project is part of an ongoing regulatory program, such as SCAQMD's Air Toxics Control Plan and AB 2588 Program, aimed at reducing criteria pollutants from certain sources, or is considered in a Program EIR, and the related projects are within approximately one mile of the Project site. If there are related projects within a one-mile radius that are part of an ongoing regulatory program or are considered in a Program EIR, then the additive effect of the related projects should be considered.

The Project is not part of an ongoing regulatory program and is not being studied as part of a Program EIR. Therefore, the SCAQMD recommends that project-specific air quality impacts should be used to determine the potential cumulative impacts to regional air quality. As discussed in Impact AQ-2, the Project would not conflict with or obstruct implementation of the applicable AQMP. Furthermore, as discussed in Impact AQ-2, daily emissions of construction-related pollutants would not exceed SCAQMD regional significance thresholds or LSTs with implementation of suggested mitigation measures. As discussed in Impact AQ-3, the proposed Project would not result in an increase in daily operational emissions that would exceed the SCAQMD cumulative operational thresholds. In addition, potential impacts to sensitive receptors during construction and operation would be less than significant with incorporation of suggested mitigation measures. Lastly, as discussed in Impact AQ-4, traffic from the Project would not create a CO hot spot at study area intersections. Therefore, the Projects' contribution to cumulative levels of any criteria pollutant would not be cumulatively considerable and would be less than significant.

4.5 Greenhouse Gas Emissions

This section analyzes greenhouse gas (GHG) emissions associated with the Project and potential impacts related to climate change. Air quality impacts are discussed in Section 4.2, *Air Quality,* and the Air Quality and Greenhouse Gas Emission Study prepared by Rincon is included as Appendix D.

4.5.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2014), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHG). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHG because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Both natural processes and human activities emit GHGs. CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF6 (CalEPA 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHG absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than CO_2 on a molecule per molecule basis (IPCC 2007). The United States Environmental Protection Agency (USEPA) began regulating GHG emissions under the Clean Air Act. Specifically, the Clean Air Act regulates carbon dioxide, methane, nitrous oxide, and fluorinated gases[1] USEPA 2017a). The IPCC outlines multiple methods of calculating GWPs; therefore, the USEPA presents the GWPs in a range, as outlined below (USEPA 2017a):

- Carbon dioxide (CO_2) – 1
- Methane (CH_4) – 28 – 36
- Nitrous oxide (N_2O) – 265 - 298
- Fluorinated gases –thousands or tens of thousands, depending

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

4.5.2 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHG were approximately 49,000 million metric tons (MMT, or gigatonne) of CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO_2 was the most abundant accounting for 76 percent of total 2010 emissions. CH_4 emissions accounted for 16 percent of the 2010 total, while N_2O and fluorinated gases account for approximately 6.2 and two percent, respectively (IPCC 2014).

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) CO_2e in 2015 (USEPA 2017b). Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015 (USEPA 2017b). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand (USEPA 2017b). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO_2 emissions, respectively (USEPA 2017b).

Based on the CARB California Greenhouse Gas Inventory for 2000-2015, California produced 440.4 MMT CO_2e in 2015 (CARB 2017b). The largest single source of GHG in California is transportation, contributing 39 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions, contributing 23 percent of the state's GHG emissions (CARB 2017b). California emissions are due in part to its large size and large population compared to other states. However, the mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. CARB has projected statewide unregulated GHG emissions for the year

[1] Chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are considered fluorinated gases.

2020 will be 509.4 MMT CO_2e (CARB 2017c). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

4.5.3 Potential Effect of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air, land, and water temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT, and surface temperatures, have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include decreased snow pack, sea level rise, and increase in extreme heat days per year, high ground-level O_3 days, large forest fires, and drought (CalEPA 2010). Below is a summary of some of the potential impacts that could be experienced in California as a result of climate change.

a. Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in many areas of California. Climate change may increase the concentration of ground-level O_3, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC 2009).

b. Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

c. Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (DWR 2008; CCCC 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

d. Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

e. Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the local and global levels. Increasing concentrations of GHGs are likely to accelerate the rate and severity of climate change impacts. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) during the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

4.5.4 Existing/Baseline Project Site Greenhouse Gas Emissions

The Project site is vacant and does not generate substantial GHG emissions. Therefore, this GHG analysis conservatively assumed the baseline emissions to be zero and focused on potential impacts from construction and operations of the proposed Project.

4.5.5 Regulatory Setting

The following regulations address both climate change and GHG emissions.

a. Federal Regulation

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate tail pipe emissions from motor-vehicles under the Federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons of CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons of CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons of CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons of CO_2e per year.

On July 3, 2012, the U.S. EPA issued a Final Rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

b. California Regulations

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the State's GHG emissions. The following section summarizes these initiatives.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires the California Air Resources Board (CARB) to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015, the governor issued EO B-30-15 calling for a new target of 40 percent below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. Implementation activities are ongoing.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017d).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the RTP. On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

SCAG was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, the governor signed SB 2X, requiring California to generate 33 percent of its electricity. On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires CalRecycle, in consultation with the State board, to adopt regulations that achieve specified targets for reducing organic waste in landfills. For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

c. California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

d. Regional Regulations

As discussed above, SB 375 requires MPOs to prepare a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that will achieve regional emission reductions through sustainable transportation and growth strategies. On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. Most recently, SCAG adopted the 2016-2040 RTP/SCS on April 7, 2016. As discussed in detail in Section 4.8, *Land Use and Planning*, the 2016-2040 RTP/SCS includes a number of strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds that included a 3,000 $MTCO_2e$/year screening threshold for residential, commercial, and mixed-use development. Under this draft, unadopted proposal, a project that exceeded that 3,000 $MTCO_2e$/year screening threshold would not be considered to have a significant GHG impact; rather, a more detailed analysis using a per capita efficiency target would be conducted. This draft screening threshold was proposed nearly 10 years ago, and no further substantial action by SCAQMD with respect to the draft threshold has occurred since.

On December 5, 2008, the SCAQMD Governing Board adopted a staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has not adopted a GHG significance threshold that would be applicable to the Project.

e. Local Regulations

The City of Burbank adopted the Burbank 2035 Greenhouse Gas Reduction Plan (GGRP) in 2013. Guided by the framework set forth in the City's 2035 General Plan, the GGRP implements Goal 3 and associated Policies 3.1 and 3.2. Policy 3.1 establishes the target for Burbank to reduce communitywide greenhouse gas emissions by at least 15% from current levels by 2020, and Policy 3.2 establishes the goal to reduce emissions by at least 30% from current levels by 2035. This target and goal are consistent with statewide efforts established in the Scoping Plan to reduce statewide GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050 (City of Burbank 2013).

Based on the 2010 jurisdictional emissions inventory and projections for the City provided in the GGRP, the 2020 communitywide emissions reduction target is 1,430,120 MT of CO_2e/year. Reductions from current statewide policies would contribute emissions reductions of 368,670 MT of CO_2e/year. Therefore, local actions must address an emissions gap of 61,109 MT of CO_2e/year by 2020. To achieve the 2035 communitywide emissions reduction goal of 1,177,746 MT of CO_2e/year, the City would require reductions of 949,754 MT of CO_2e/year. Reductions achieved from statewide policies would contribute 494,944 MT of CO_2e/year and local actions would be needed to achieve the remaining emissions gap of 454,810 MT of CO_2e/year by 2035.

As discussed in Section 2, *Air Quality*, the Burbank 2035 General Plan provides goals and policies related to greenhouse gas reductions in the Air Quality and Climate Change Element. The specific goals and policies include the following:

Goal 3: Reduction of Greenhouse Gas Emissions

Policy 3.1: Develop and adopt a binding, enforceable reduction target and mitigation measures and actions to reduce communitywide greenhouse gas emissions within Burbank by at least 15% from current levels by 2020.

Policy 3.2: Establish a goal and strategies to reduce communitywide greenhouse gas emissions by at least 30% from current levels by 2035.

Policy 3.3: Continue to participate in the Cities for Climate Protection program and applicable State and Federal climate change programs.

Policy 3.4: Reduce greenhouse gas emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio.

Policy 3.5: Submit an annual report on implementation of the Greenhouse Gas Reduction Plan, in conjunction with the annual report to the City Council regarding implementation of Burbank2035.

Policy 3.6: Reduce greenhouse gas emissions by encouraging the retrofit of older, energy inefficient buildings.

Policy 3.8: Transition all economic sectors, new development, and existing infrastructure and development to low- or zero-carbon energy sources. Encourage implementation and provide incentives for low- or zero-carbon energy sources.

Goal 4: Climate Change

Policy 4.1: Evaluate the potential effects of climate change on Burbank's human and natural systems and prepare strategies that allow the City to appropriately respond.

Policy 4.2: Consult with state resource and emergency management agencies regarding updates to climate change science and development of adaptation priorities.

Neither the GGRP nor the City's 2035 General Plan include, nor has the City adopted, a numerical threshold of significance for GHG emissions for individual development projects.

4.5.6 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of GHG emission impacts. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors be considered in the determination of significance (e.g., the extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor have the SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment. Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

Calculations of CO_2, CH_4, and N_2O emissions are provided. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that the Project would emit in the largest quantities (IPCC 2007). Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, since fluorinated gases are primarily associated with industrial processes, and the proposed Project involves residential and commercial uses, the quantity of fluorinated gases would not be significant. Emissions of all GHGs are converted into their equivalent GWP in MT of CO_2e. Small amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would also be emitted; however, these other GHG emissions would not substantially add to the total GHG emissions. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate*

Change white paper and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CAPCOA 2008; CCAR 2009). GHG emissions associated with the proposed Project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (see Appendix D for CalEEMod worksheets).

Construction Emissions

Construction activities emit GHGs primarily through combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and in the commute vehicles of construction workers. Every phase of the construction process, including grading, paving, and building, emits GHG emissions in volumes proportional to the quantity and type of construction equipment used. Heavier equipment typically emits more GHGs per hour of use than lighter equipment because of their greater fuel consumption and engine design.

CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the Project is expected to take approximately 61 months (starting in the beginning of September 2019 and going through the end of September 2025), with full operation assumed to begin in 2026, the first full year after the end of construction. It is assumed that all construction equipment used would be diesel-powered. The construction start date may occur two to three months later than September 2019; however, using September 2019 is a conservative assumption because emissions are anticipated decrease over time and would not affect the annual GHG emissions calculations.

GHG emissions from hauling soil from the site to landfills was also included in the emissions modeling. The entire Project site would be graded and approximately 127,000 cubic yards of cut soil would be exported from the Project site. Given an estimated haul truck capacity of 16 cubic yards (consistent with CalEEMod standard for truck capacity), approximately 7,938 outbound haul trucks (equivalent to 15,876 total truck trips) would be required for soil export. Approximately 32,000 cubic yards of the total soil export is conservatively assumed to be contaminated, requiring hauling to Kettleman Hills Landfill, approximately 170 miles from the Project site. The remainder of the soil export (95,000 cubic yards) would be transported to Simi Valley Landfill, approximately 30 miles from the Project site. This was incorporated into CalEEMod using a weighted hauling trip length of 65.3 miles for all one-way hauling trips.

Complete results from CalEEMod and assumptions can be viewed in Appendix D. This analysis follows the South Coast Air Quality Management District (SCAQMD) recommendation to amortize construction emissions over a period of 30 years (the assumed life of the Project) and add the amortized construction emissions to operational emissions to determine annual emissions of the Project (SCAQMD 2008).

Operational Emissions

CalEEMod calculates operational emissions of CO_2, CH_4, and N_2O associated with energy use, area sources, waste generation, water use and conveyance. CalEEMod also calculates emissions of CO_2 and CH_4 generated by Project-generated vehicle trips (i.e., mobile sources). However, CalEEMod does not calculate N_2O emissions from mobile sources; therefore, N_2O emissions were quantified separately (see Appendix D).

Area Source Emissions

Area sources include GHG emissions that would occur from the use of landscaping equipment. The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. The landscaping equipment emission values were derived from the 2011 Off-Road Equipment Inventory Model.

Energy Use Emissions

As a result of the consumption of electricity and natural gas during Project operation, GHGs are emitted on-site during the combustion of natural gas for space and water heating and cooking and off-site during the generation of electricity from fossil fuels in power plants. CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the Project location and utility provider.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. The lighting energy intensity factor for residential land uses was reduced by 75 percent to account for the 2016 Title 24 requirements.

As discussed in Section 2, *Project Description*, the Project would include green building features, including a condition of approval that would go towards the City's long term goal of providing 10% of the building's modeled energy use from renewable sources including, but not limited to: payment of the Project's fair share costs in the form of rate payer fees that support the City's expansion of its renewable energy sources portfolio consistent with BWP's 2019 Integrated Resource Plan (IRP); installation roof top solar photovoltaics; installation of EV chargers; and installation of energy star appliances would all help reduce energy consumption and GHG emissions attributed to the Project (Air Quality PDF-2). The installation of roof top solar and use of energy star appliances were included in the CalEEMod analysis for the Project.

The Project would be served by Burbank Water and Power (BWP). Therefore, BWP's specific energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. BWP had renewable energy procurement of 29 percent as of 2017 (CEC 2018). Per SB 100, the statewide RPS Program requires electricity providers to increase procurement from eligible renewable energy sources to 44 percent by 2024 and 60 percent by 2030. However, the default energy intensity factors included in CalEEMod are based on data from 2009, at which time BWP had only achieved a 10 percent procurement of renewable energy (CEC 2010). To account for the continuing effects of the RPS, the energy intensity factors included in CalEEMod for the Project were reduced based on the percentage of renewables reported by BWP. Energy intensity factors that account for RPS targets established by SB 100 were utilized. Therefore, based on linear interpolation between the 2024 and 2030 targets, it was calculated that BWP would achieve a 49.33 percent procurement of renewable energy by 2026, when the Project would be fully operational. BWP energy intensity factors that include this reduction are shown in Table 4.5-1.

Table 4.5-1 Burbank Water and Power Intensity Factors

	2009 (lbs/MWh)[1]	2024 (lbs/MWh)[2]	2026 (lbs/MWh)[3]	2030 (lbs/MWh)[2]
Percent Procurement	10%	44%	49.33%	60%
Carbon dioxide (CO_2)	1,096.12	682.03	617.12	487.16
Methane (CH_4)	0.029	0.018	0.016	0.013
Nitrous oxide (N_2O)	0.006	0.004	0.003	0.003

[1] Source: CEC 2010
[2] RPS goals established by SB 100
[3] Linear interpolation of RPS goals for 2024 and 2030

Solid Waste Emissions

The disposal of solid waste produces GHG emissions from the transportation of waste, anaerobic decomposition in landfills, and incineration. To calculate the GHG emissions generated by solid waste disposal, the total volume of solid waste was calculated using waste disposal rates identified by the California Department of Resources Recycling and Recovery (CalRecycle). The methods for quantifying GHG emissions from solid waste are based on the IPCC 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 had achieved a statewide 50 percent diversion of solid waste from landfills through "reduce/recycle/compost" programs. However, AB 341 mandates that 75 percent of the solid waste generated be reduced, recycled, or composted by 2020. Therefore, to account for the continuing actions of recycling requirements under state law (i.e., AB 341), an additional 25 percent solid waste diversion rate was included in CalEEMod.

Water and Wastewater Emissions

The amount of water used and the amount of wastewater generated by a Project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O.

New development would be subject to CalGreen, which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CalGreen, a 20 percent reduction in indoor water use was included in the water consumption calculations for the proposed Project. In addition to water reductions associated with building code compliance and Project design features, the GHG emissions from the energy used to transport the water for the proposed Project scenario account for compliance with the RPS as discussed under *Energy Use Emissions*.

Mobile Source Emissions

GHG emissions from vehicles are generated by the combustion of fossil fuels in vehicle engines. Vehicle emissions are calculated based on the vehicle type and the trip rate for each land use. Trip generation rates were sourced from the Transportation Impact Analysis prepared for the proposed Project by Fehr and Peers in March 2019 (see Appendix J). The vehicle emission factors and fleet mix used in CalEEMod are derived from CARB's Emission Factors 2011 model, which includes GHG reductions achieved by implementation of Pavley I (Clean Car Standards) and the Low Carbon Fuel Standard and are thus considered in the calculation of standards for Project emissions. Because

CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified separately using guidance from CARB (CARB 2013; see Appendix D for calculations). GHG emissions from passenger and light duty vehicles were derived based on the conservative assumption that the fleet mix percentage for these vehicle types equaled the percentage of total mobile source GHG emissions. This is a conservative assumption because heavy duty diesel trucks, buses, and other vehicle classes included in the fleet mix are less efficient than passenger and light duty vehicles and would be responsible for a larger percentage of total GHG emissions than the more efficient passenger and light duty vehicle classes.

Project Service Population

The Project's per person GHG emissions were calculated by dividing total GHG emissions by the Project's service population (residents, employees, and hotel guests). Section 4.2, Air Quality, estimated that the Project would generate 1,433 new residents and 247 new employees (see Section 4.2, Air Quality, for calculation details). In addition, the Project includes a 307-room hotel that would accommodate guests. According to the American Hotel & Lodging Association, 40 percent of travelers travel for business and 60 percent travel for leisure (2015). Conservatively assuming that business travelers occupy rooms individually and those traveling for leisure occupy rooms at a rate of two guests, and an 82.5 percent occupancy rate in Burbank, a 307-room hotel would typically have 405 guests on any given day (Visit Burbank 2018). Therefore, the Project's service population would be 2,085 persons (1,433 residents + 247 employees + 405 guests). This service population is provided for informational purposes and to aid in the analysis of the Project's consistency with GHG reduction plans.

Significance Thresholds

Based on Appendix G of the State CEQA Guidelines, impacts related to GHG emissions from the Project would be significant if the Project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (AEP 2017).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of project-related GHG emissions, including: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements of the City's GGRP, and CARB's 2017 Scoping Plan, both of which are designed to achieve the GHG reduction goals of AB 32, SB 375, and SB 32.

b. Project Impacts

Threshold 1:	Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Threshold 2:	Would the proposed project conflict with the applicable plan, policy or regulation of the purpose of reducing emissions of greenhouse gases?

Impact GHG-1 THE PROJECT WOULD NOT CONFLICT WITH APPLICABLE PLANS, POLICIES, OR REGULATIONS FOR REDUCING GREENHOUSE GAS EMISSIONS, INCLUDING THE CITY'S GGRP, THE SCAG RTP/SCS, AND THE CARB 2017 SCOPING PLAN. THE PROJECT'S IMPACT TO GLOBAL CLIMATE CHANGE WOULD BE LESS THAN SIGNIFICANT.

Consistency Evaluation

Burbank GGRP and General Plan

As mentioned under *Local Regulations*, the City of Burbank has developed a Greenhouse Gas Reduction Plan (GGRP) in addition to the Air Quality and Climate Change Element included in the City's General Plan. A number GGRP and General Plan policies were established to reduce the citywide levels of GHG over time. These are summarized under Local Regulations above. The General Plan has a specific policy (Policy 3.4) aimed at reducing GHG emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio. The Project would be consistent with this policy as it is an infill development, located near existing transit, and would include water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping that uses recycled water. The Project is also consistent with applicable GGRP policies, as outlined in Table 4.5-2.

Table 4.5-2 Project Consistency with Applicable GGRP Measures

Measure	Project Consistency
Mandatory Measures	
E-1.1 Energy Efficiency in New Construction The City will require new commercial project to be constructed to Title 24 Tier 1 levels (e.g., exceed current efficiency standards by 15 percent).	**Consistent** As noted in Section 2, Project Description, the Project would meet the equivalent of LEED Gold Certified and would be constructed in a manner that would provide consistency with Title 24 Tier 1 levels. Additionally, the design and development of residential uses included in the Project would comply with CALGreen Building Standards, which include measures to reduce emissions and energy consumption. The Project would also comply with SCAQMD Rule 1113, which limits ROGs from building architectural coatings to 50 g/ L.
E-1.7 Building Shade Trees BWP will continue to administer the Made in Shade Program. The City will also revise the Zoning Ordinance to require the planning of two building shade trees per parcel to accompany each new single-family residential unit. The City will update its Street Tree Plan and Urban Forestry program, with a focus on identifying streets that currently lack street trees, parking lots that could accommodate additional shade trees, and locations for new tree plantings in City parks and open space.	**Consistent** Although the Project would not include single-family residential units, it involves the development of internal courtyards, expanded sidewalks, and a publicly accessible plaza that would include a mix of amenities such as landscaping, seating, and new shade trees. The Project also involves the creation of earth mounds and the use of sound walls to provide a sound buffer as well as the incorporation of evergreen trees where physically feasible to act as a screen and reduce the heat island effect.
E-2.1 Renewable Energy Requirements The City will require new single-family residential homes to include a 1.8 kWh solar voltaic system, and will require new multi-family and commercial construction to provide 10% of the buildings modeled energy use from renewable sources (e.g., solar PV, geothermal heat pumps). The City will require installation of solar water heaters in	**Consistent** The Project would include renewable energy via roof-top solar panels, use of the Green Building Code, pre-wiring for additional solar panels and electric vehicle charging stations, and the payment of applicable development impact and aid in construction fees to the City's public utilities. The solar panels installation would go towards

Measure	Project Consistency
all new residential construction, to the fullest extent possible. The City will also require pre-wiring and pre-plumbing on new construction for residential solar PV and solar water heaters to provide for easier and less costly future installation.	the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources. Collectively, these efforts would ensure compliance with the City's long-term goals of moving toward the use of alternative fuels.
E-2.1 Transportation Management Organization Expansion The City will work with the TMO to expand the geographic reach of its programs and the extent of services it currently provides; first expanding into the Golden State and Empire areas (by 2020), and then expanding citywide at a later date. In each case, the City will require that all new businesses with 25 or more employees located within the TMP boundary become TMO members and fulfill reporting requirements.	**Consistent** This measure is aimed at the City rather than at individual developers. Nevertheless, the Project applicant would be a participant in the TMO and would implement applicable requirements (e.g., development of/participation in carpool and ridesharing programs, financial or other incentives to rideshare or use transit) and would fulfill the associated reporting requirements. Additionally, the Project would promote trip reduction through the following: ▪ Location immediately adjacent to transit options (rail and buses) and within ¼ mile of a range of goods and services ▪ A total of 73 bicycle parking spaces for residences and the hotel (57 residential and 16 hotel) ▪ Direct sidewalk access from street to Project building ▪ Safe bicycle access from the street to bicycle parking facilities
SW-1.1 Food Scrap and Compostable Paper Diversion Ordinance The City will adopt a food scraps and compostable paper diversion ordinance, requiring all food waste and compostable paper to be diverted from the waste stream to composting facilities. As part of this ordinance, the City will update its yard waste collection program to allow customers to include food scraps and compostable paper in their yard waste bins.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet adopted the food scrap/compostable paper diversion ordinance, but the Project would be required to comply with all applicable City ordinances, including those specific to diverting food scraps and compostable paper, at such time as they are adopted.
SW-1.2: Yard Waste Diversion Ordinance The City will adopt an ordinance banning disposal of yard waste in trash bins. Multi-family residential and non-residential properties that are not currently served by the City's solid waste collection program would need to contract with a yard waste collection service provider.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet adopted the yard waste diversion ordinance, but the Project would be required to comply with all applicable City ordinances, including those specific to diverting yard waste, at such time as they are adopted.
SW-1.3: Lumber Diversion Ordinance The City will amend its existing ordinance to explicitly require the diversion of 75% of waste from construction and demolition debris generated by new construction and renovations, including scrap lumber.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet amended the construction & demolition debris diversion ordinance (the ordinance currently requires a 65% diversion rate), but the Project would be required to comply with all applicable City ordinances, including those specific to diverting construction/demolition debris, at such time as they are adopted.
Voluntary Measures	
E-1.3 ENERGY STAR Appliances The City will encourage voluntary community participation to install ENERGY STAR appliances or other energy-	**Consistent** As discussed in Section 2, *Project Description*, the Project would meet the equivalent of LEED Gold Certified and

Measure	Project Consistency
efficient appliance models in both new and existing residential units. **E-1.4: Smart Grid Integration** The City will encourage voluntary adoption of smart grid technology in new and existing construction, promoting the use of smart appliances in homes and businesses and the use of OPower to track building energy use.	Green Building Code standards. To that end, the Project would include ENERGY STAR or similarly rated appliances in new residential units in order to maximize all appliances' energy efficiency.
E-1.5: Cool Roofs The City will extend its current Cool Roof Pilot Program and will advertise BWP's non-residential cool roof incentives to building owners when they obtain permits for re-roofing.	**Consistent** Although this measure is aimed at the City, the Project includes cool roof features, including use of a white reflective cooling material, as noted in Section 2, *Project Description*.
E-2.2: Solar Voltaic Systems The City will actively promote the development of building-scale solar energy. The City will develop an outreach program to ensure BWP's Solar Photovoltaic Power program is fully subscribed between 2013 and 2016 to meet its solar goal.	**Consistent** Although this measure is aimed at the City, the Project includes rooftop solar panels that would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources.
W-1.1: Water Conservation Programs The City will implement water conservation programs described in the UWMP in support of BWP's goal to reduce water consumption by 1% annually.	**Consistent** Although this measure is aimed at the City, the Project includes water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping and use of recycled water. In compliance with CalGreen, these features would reduce indoor water use by at least 20%.
W-1.2: Recycled Water Master Plan The City will complete the recycled water system expansion outlined in the Recycled Water Use Master Plan and implement recycled water requirements for large irrigation users.	**Consistent** Although this measure is aimed at the City, as required by Burbank Water and Power, the Project would include the use of recycled water during construction and for irrigation and HVAC cooling during operation.

SCAG Regional Transportation *Plan/Sustainable Communities Strategy*

As discussed in detail under Impact LU-1 in Section 4.8, *Land Use and Planning*, the Project would not conflict with applicable goals of the 2016-2040 RTP/SCS, which focus on mobility, accessibility, a strong economy, and sustainability. Major goals of the RTP/SCS include:

1. Align the plan investments and policies with improving regional economic development and competitiveness.
2. Maximize mobility and accessibility for all people and goods in the region.
3. Ensure travel safety and reliability for all people and goods in the region.
4. Preserve and ensure a sustainable regional transportation system.
5. Maximize the productivity of our transportation system.
6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).
7. Actively encourage and create incentives for energy efficiency, where possible.
8. Encourage land use and growth patterns that facilitate transit and active transportation.
9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

Several of these goals, notably nos. 2, 6, 7, and 8, relate directly or indirectly to GHG emissions reduction and the Project.

Although Goal 2 is not specifically aimed at individual development projects, the Project would contribute to the goal of maximizing mobility and accessibility by locating mixed-use development on a site in an urban area that includes a range of transit and active transportation options (as discussed further in the following paragraph). The Project site's location immediately adjacent to transit opportunities and within ¼-mile of downtown Burbank ensure that the Project would be regionally accessible and that Project site residents, employees, and visitors would have access to a range of goods and services via walking/bicycling and transit. Further, the elevated and protected bike lanes, enhanced sidewalks, high visibility crosswalks and upgrades to the Front Street right-of-way adjacent to the Project site are all intended to provide a safe and efficient means of travel for bicyclists, pedestrians, and drivers to and from the Metrolink Station, the Project site, and Downtown Burbank.

With respect to Goals 6 and 8, the Project would involve a residential development in an urbanized area that is currently well served by public transit. As outlined in Section 4.12, *Transportation and Traffic*, the Project would be served by the Metrolink commuter rail, Los Angeles County Metropolitan Transportation Authority (Metro) bus lines, Burbank Bus lines, and Glendale Beelines. Ten individual bus lines currently serve the Project area. The Project would also be located within 0.3 miles of Chandler Boulevard that has a bike path and within 0.4 miles of Victory Boulevard, which has a bike lane. The Project would also add a bike lane on Front Street immediately adjacent to the Project Site. The Project's proximity to these bicycle facilities would encourage the use of transit and active transportation.

With respect to Goal 7, the design and implementation of the Project would comply with applicable State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard and Title 24 of the California Building Code that would reduce anticipated emissions associated with the proposed Project. The Project would be conditioned to comply with these existing requirements. For example, in accordance with the 2016 California Green Building Standards Code, the Project would include a schedule of plumbing fixtures and fixture fittings that would reduce the overall use of potable water in the building by at least 20 percent from the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. In addition, the Project would achieve LEED Gold certification or equivalency.

In order to evaluate the Project's consistency with the objectives of SB 375 and the goals of the 2016-2040 RTP/SCS, per-capita CO_2 emissions from passenger and light duty vehicles were analyzed. The 2016-2040 RTP/SCS shows regional per-capita GHG emissions from passenger and light duty vehicles being reduced by 21 percent relative to 2005 levels by 2040. The 2016-2040 RTP/SCS determined that the 2005 per-capita CO_2 emissions from passenger and light duty vehicles in the SCAG region were 23.8 pounds per day.

For the proposed Project, per-capita CO_2 emissions from passenger cars/light duty vehicles would be 14.2 lbs/day per person, a reduction of approximately 40 percent relative to the 2005 SCAG regional baseline levels examined under SB 375 (see Appendix D for per capita mobile emissions calculation). This 40 percent reduction in passenger vehicle per-capita CO_2 emissions exceeds the 21 percent reduction target of the 2016-2040 RTP/SCS as well as the CARB established SB 375 targets of a 13 percent reduction by 2035.

In addition, the 2017 Scoping Plan states that "Since 2014, CARB has been working with MPOs and other stakeholders to update regional SB 375 targets. At the same time, CARB has also conducted analysis for development of the Mobile Source Strategy and Scoping Plan that identifies the need for statewide per capita greenhouse gas emissions reductions on the order of 25 percent by 2035, to meet our climate goals." The Project's 40 percent reduction in passenger vehicle per capita CO_2 emissions relative to the 2005 SCAG regional baseline levels examined under SB 375 would be consistent with this objective of reaching a 25 percent reduction in mobile source emissions from passenger cars by 2035, as identified in the 2017 Scoping Plan.

CARB 2017 Scoping Plan

CARB's 2017 Scoping Plan indicates that local actions that reduce vehicle miles traveled (VMT) are necessary to meet transportation sector-specific goals and achieve the 2030 GHG emission reduction target under SB 32. In its evaluation of the role of the transportation system in meeting the statewide emissions targets, CARB determined that VMT reductions of 7 percent below projected VMT levels in 2030 (which includes currently adopted SB 375 SCSs) are necessary. A 7 percent VMT reduction translates to a reduction, on average, of 1.5 miles/person/day from projected levels in 2030. To that end, the 2017 Scoping Plan recommends that local governments consider policies to reduce VMT to help achieve these reductions, including: land use and community design that reduces VMT; transit-oriented development; street design policies that prioritize transit, biking, and walking; and increasing low carbon mobility choices, including improved access to viable and affordable public transportation and active transportation opportunities.

As discussed above, the Project site is located in an urbanized area on a site that is immediately adjacent to a range of transit options, including low carbon rail transit. In addition, the Project site is within walking distance of downtown Burbank, which would provide a range of goods and services to site residents, employees, and visitors. Finally, the Project is a relatively high density/intensity mixed-use development that provides housing, jobs, and visitor amenities in proximity to both transit options, jobs, and services. Based on these facts, the Project is consistent with the general goal of reducing GHG emissions by reducing VMT.

The 2017 Scoping Plan also recommends that, for discretionary approvals and entitlements of individual development projects, lead agencies should prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions. For example, CARB suggests consideration of design options that reduce VMT, promote transit-oriented development, promote street design policies that prioritize transit, biking, and walking, and increase low carbon mobility choices, including improved access to viable and affordable public transportation, and active transportation opportunities. CARB notes that additional GHG reductions can be achieved through investment in local building retrofit programs that can pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures, as well as local direct investment to finance installation of regional electric vehicle (EV) charging stations and enhancement of local urban forests.

As discussed above, the proposed Project is a transit-oriented development on a site located in proximity to a range of transit options. Again, the site is also within walking distance of a range of goods and services in downtown Burbank. As discussed in Section 2, *Project Description*, and under *Burbank GGRP and General Plan*, the Project would be designed to be the equivalent of the United States Green Building Council (USGBC) LEED Gold Certified and would comply with Tier 1 applicable provisions of the 2016 California Green Building Standards Code (CALGreen Code). It would therefore include energy efficient lighting, appliances, windows, and insulation, as well as water conserving features and use recycled water. The Project also includes cool roofs, roof top solar panels, LED lighting, and various bicycle and pedestrian amenities. Finally, it would increase landscaping, including trees on the site, which is currently essentially devoid of vegetation. Based on these design features, the Project would implement 2017 Scoping Plan recommendations for individual development projects. An analysis of the Project's consistency with the Climate Change Scoping Plan and the 2017 Scoping Plan Update is set forth in Table 4.5-5 and , respectively.

Table 4.5-3 Project Consistency with Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Area (Less than 1 percent of Project inventory)		
SCAQMD Rule 445 (Wood Burning Devices) Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	**Consistent** The Project would not use wood burning devices or stoves.
Energy (33 percent of Project inventory)		
California Renewables Portfolio Standard (RPS) program Senate Bill 2X modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. California Senate Bill 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.	BWP	**Consistent** BWP's commitment to achieve 33 percent renewables by 2020 would meet the requirements of the RPS program. BWP indicated in its 2019 Integrated Resources Plan that 32 percent of its electricity came from renewable resources in 2017. As BWP would provide electricity service to the Project Site, the Project would use electricity that is produced consistent with this performance-based standard. In addition, the solar panel installation would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources.
Senate Bill 350 (SB 350) The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030 and also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[b]	State Energy Resources Conservation and Development Commission and BWP	**Consistent** BWP would be required to meet this performance-based standard. As BWP would provide electricity service to the Project Site, the Project by 2030 would use electricity consistent with this performance-based standard. Full Project operation would occur in 2026 and, therefore, the estimated GHG emissions from electricity usage provided below conservatively do not include implementation of SB 350 with a compliance date of 2030[a]. Electricity GHG emissions presented in Table 4.5-8 below would be further reduced by 2030 as the electricity provided to the Project Site would meet the requirements under SB 350. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under the CCR, Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems and insulation. The Project would further support this action/strategy by achieving LEED Gold certification or equivalence,

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		thereby reducing overall energy usage compared to baseline conditions.
Senate Bill 1368 (SB 1368) GHG Emissions Standard for Baseload Generation prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.	State, CEC, and BWP	**Consistent** BWP meets the requirements of SB 1368. As BWP would provide electricity service to the Project Site, the Project would use electricity that meets the requirements under SB 1368.
California Code of Regulations (CCR), Title 20 The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	**Consistent** The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Project would result in new land use development that would be outfitted with appliances and lighting that comply with CEC's standards. In addition, the Project would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions.
CCR, Title 24, Building Standards Code The 2016 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.[c] The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.	State and CEC	**Consistent** Consistent with regulatory requirements, the Project would comply with applicable provisions of the 2016 Building Energy Efficiency Standards. The 2016 Title 24 standards are 28 percent more efficient (for electricity) than residential construction built to the 2013 Title 24 standards and 5 percent more efficient (for electricity) for non-residential construction built to 2013 Title 24 standards. The 2016 Title 24 standards are more efficient than the 2020 Projected Emissions under Business-as-Usual in CARB's 2008 Climate Action Scoping Plan. The standards promote the use of better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. The Project would further support this regulation since the Project would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions. Thus, the Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the 2008 Climate Action Scoping Plan to reduce GHG emissions.
Energy Independence and Security Act of 2007 (EISA) EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.	Federal/ Manufacturers	**Consistent** EISA would serve to reduce the use of incandescent light bulbs for the Project and, thus, reduce energy usage associated with lighting.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Assembly Bill 1109 (AB 1109) The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing for sale in the state specified general purpose lights that contain levels of hazardous substances, as it requires the establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.[d]	State/ Manufacturers	**Consistent** As with the EISA, discussed above, the Project would meet the requirements under AB 1109 because it incorporates energy efficient lighting and electricity consumption and complies with local and state green building programs.
Cap-and-Trade Program The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.	State	**Consistent** As required by AB 32 and the 2008 Climate Change Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the development facilitated by the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's annual electricity usage would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.
Million Solar Roofs Program The program is implemented through SB 1 (Murray, 2006), which provides up to $3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.	State	**Consistent** The Project would achieve LEED Gold certification or equivalence. In addition, the Project would include solar panels that would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources. In addition, the Project would be eligible for the incentives offered by the Million Solar Roofs program.
Mobile (59 percent of Project inventory)		
Assembly Bill 1493 (AB 1493) "Pavley Standards" AB 1493 requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. In compliance with AB 1493, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles and light -	State, CARB	**Consistent** The Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and reduced GHG emissions by about 30 percent in 2016, all while improving fuel efficiency. This regulatory program applies to vehicle manufacturers, and not directly to land use development. Vehicular travel by the Project would benefit from this regulation in the form of reduced GHG emissions because vehicle trips associated with the Project would be affected by AB 1493. Mobile source emissions generated by the Project would be reduced with implementation of AB 1493 consistent

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
duty trucks of model year 2009 through 2016. Model years 2017 through 2025 are addressed by California's Advanced Clean Cars program (discussed below).		with reduction of GHG emissions under AB 32.
Executive Order S-01-07 The Low Carbon Fuel Standard (LCFS) requires a 10 percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009).[e,f]	State, CARB	**Not applicable** This regulatory program applies to fuel suppliers, and not directly to land use development. GHG emissions related to vehicular travel by the Project would benefit from this regulation because fuel used by Project-related vehicles would be compliant with LCFS.
Advanced Clean Cars Program In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.	State, CARB	**Not applicable** Similar to AB 1493, this regulatory program applies to manufacturers, and not directly to land use development. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project. GHG emissions related to vehicular travel by the Project would benefit from this regulation and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program consistent with reduction of GHG emissions under AB 32. The Project would further support this regulation since the Applicant would provide parking spaces pre-wired for electric vehicles.
Senate Bill (SB) 375 SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.	State, CARB Regional, SCAG	**Consistent** SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would concentrate new residential and commercial retail and restaurant uses within a high quality transit area (HQTA). Therefore, the Project would be consistent with SCAG's 2016 RTP/SCS as it is located within a HQTA. Furthermore, the 2016 RTP/SCS would result in an estimated 18 percent decrease in per capita passenger vehicle GHG emissions by 2035 and a 21 percent decrease in per capita passenger vehicle GHG emissions by 2040, within the SCAG region. CARB updated the SB 375 targets for the SCAG region, requiring a 19 percent decrease in VMT by 2035. Implementation of the 2016 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals.
Solid Waste (3 percent of Project inventory)		
California Integrated Waste Management Act of 1989 and Assembly Bill 341 The California Integrated Waste Management Act of 1989 requires each jurisdiction's source reduction and recycling	State	**Consistent** GHG emissions related to solid waste generation from the Project would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.[g] ***AB 341 (2011)*** amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[h]		would then in return decrease the amount of methane released from the decomposing solid waste. As part of their lease or sales agreement, all Project tenants and owners (both residential and commercial) would be required to recycle all qualifying items in accordance with the Burbank Recycling Center's guidelines to help ensure that the Project would meet the 75 percent diversion required by AB 341. In addition, the Project would comply with the City's Diversion of Construction and Demolition Debris Ordinance, which requires the diversion and recycling of at least 65 percent of the Project's construction and demolition debris.
Water (4 percent of Project inventory)		
CCR, Title 24, Building Standards Code The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20 percent overall water use reduction.	State	**Consistent** The Project would comply with applicable provisions of the California Green Building Standards Code that require a 20 percent overall water use reduction.
Senate Bill X7-7 The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	State	**Consistent** As discussed above under Title 24, the Project would incorporate water conservation features that would contribute towards meeting this performance-based standard. In addition, the Project includes water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping and use of recycled water. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Construction (2 percent of Project inventory)		
CARB In-Use Off-Road Regulation CARB's in-use off-road diesel vehicle regulation ("Off-Road Diesel Fleet Regulation") requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.	CARB	**Consistent** The Applicant would use construction contractors that would comply with this regulation.
CARB In-Use On-Road Regulation CARB's in-use on-road heavy-duty vehicle regulation ("Truck and Bus Regulation") applies to nearly all privately and federally owned diesel fueled trucks and buses and to	CARB	**Consistent** The Applicant would use construction contractors that would comply with this regulation.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.[i]		

[a] *Operational GHG emissions would be anticipated to decrease in subsequent years as the vehicle fleet mix is anticipated to become less polluting in future years due to more stringent emissions control regulations.*

[b] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, Ch. 547.*

[c] *CEC, Adoption Hearing, 2016 Building Energy Efficiency Standards.*

[d] *2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.*

[e] *CARB, Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources, October 23, 2009.*

[f] *Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.*

[g] *Cal. Pub. Res. Code § 41780(a).*

[h] *Cal. Pub. Res. Code § 41780.01(a).*

[i] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, page last reviewed December 14, 2017.*

Table 4.5-4 Project Consistency with Climate Change 2017 Scoping Plan Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Senate Bill 350 (SB 350) The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030.[a] Required measures include: ▪ Increase RPS to 50 percent of retail sales by 2030. ▪ Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. ▪ Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.	CPUC, CEC, CARB	**Consistent** BWP is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As BWP would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this action/strategy because it would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Implement Mobile Source Strategy (Cleaner Technology and Fuels) ▪ At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025. ▪ At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030. ▪ Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations. ▪ Medium- and heavy-duty GHG Phase 2. ▪ Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard. ▪ Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030. ▪ Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."	CARB, CalSTA, SGC, Caltrans CEC, OPR, Local agencies	**Consistent** CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program likely will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project, depending on the outcome of ongoing negotiations between CARB and EPA regarding federal standards. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030. In addition, the Project would support this policy since the Applicant would prewire parking spaces for electrical vehicles. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.[b,c] GHG emissions generated by Project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Project would also benefit from these measures once adopted. SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would concentrate new residential and hotel uses within a HQTA. Therefore, the Project would be consistent with SCAG's 2016 RTP/SCS, as it is located within a HQTA. Furthermore, the 2016 RTP/SCS would result in an estimated 18 percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21 percent decrease in per capita GHG emissions from passenger vehicles by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19 percent decrease in VMT by 2035. Implementation of the 2016 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		Therefore, the Project would be consistent with SB 375, the 2016 RTP/SCS, and with CARB's updated 2035 target.
Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets)	CARB	**Consistent** Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035. The Project would be consistent with SB 375 for developing an infill project within an existing urbanized area. This would concentrate new residential and hotel uses within a HQTA. Therefore, the Project would be consistent with SB 375 and the 2016 RTP/SCS, and with CARB's updated 2035 target.
By 2019, adjust performance measures used to select and design transportation facilities ▪ Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**Not Applicable** The Project would not involve construction of transportation facilities. However, the Project Site is located immediately adjacent to the Metrolink station. The Project benefits from this proximity as it will encourage use of mass transit, resulting in a reduction of Project-related vehicle trips to and from the Project Site.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts)	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**Consistent** The Project would support this policy since the Applicant would provide prewiring for electric vehicle chargers in parking spaces.
Implement California Sustainable Freight Action Plan ▪ Improve freight system efficiency. ▪ Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	CARB	**Not Applicable** The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent	CARB	**Consistent** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with LCFS.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Implement the Short-Lived Climate Pollutant Strategy by 2030: ▪ 40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. ▪ 50 percent reduction in black carbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent** Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.[e] The Project would comply with the CARB SLCP Reduction Strategy, which limits the use of hydrofluorocarbons for refrigeration uses.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent** Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50 percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75 percent reduction by 2025. The Project would be consistent with AB 341, which requires not less than 75 percent of solid waste generated be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps	CARB	**Consistent** The current Cap-and-Trade program would end on December 31, 2020. Assembly Bill 398 (AB 398) was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions. Under the Cap-and-Trade program, entities such as power generation companies and natural gas processing plants would be required to limit or reduce GHG emissions. This would result in a reduction of GHG emissions associated with the Project's energy usage. As the Project would not impede the Program's progress, the Project is considered consistent.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink: ▪ Protect land from conversion through conservation easements and other incentives. ▪ Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity ▪ Utilize wood and agricultural products to increase the amount of carbon stored in	CNRA and departments within, CDFA, CalEPA, CARB	**Not Applicable** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
the natural and built environments ▪ Establish scenario projections to serve as the foundation for the Implementation Plan		
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**Not Applicable** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Implement Forest Carbon Plan	CNRA, CAL FIRE, CalEPA and departments within	**Not Applicable** This regulatory program applies to state and federal forest land, not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors	State Agencies & Local Agencies	**Not Applicable** Funding and financing mechanisms are the responsibility of the state and local agencies. The Project would not conflict with funding and financing mechanisms to support GHG reductions.

[a] *Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[b] *CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm.*

[c] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), www.arb.ca.gov/msprog/actruck/actruck.htm.*

[d] *CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm.*

[e] *CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm.*

Source: California Air Resources Board (CARB), California's 2017 Climate Change Scoping Plan, November 2017.

In order to evaluate the Project's consistency with the GGRP and 2017 Scoping Plan, this analysis includes an evaluation of Project emissions against a 2030 Project-specific efficiency criteria that is derived from the GHG inventory contained in the GGRP. This metric is not a significance threshold but is included for informational purposes to help determine the Project's consistency with the GGRP and 2017 Scoping Plan. Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant.

As part of its GGRP, the City completed a 2010 baseline GHG inventory that calculated communitywide emissions of 1,992,162 MT of CO_2e per year, including landing and takeoff emissions associated with the Burbank Airport. To calculate a 2030 locally-applicable, project-specific criteria to determine the Project's consistency with the non-transportation related objectives of the 2017 Scoping Plan and goals of SB 32, the 2010 inventory was used to determine the magnitude of GHG reductions that would be necessary to achieve the GHG reduction targets set by the State for all non-transportation emission sources. The Project's consistency with the 2017 Scoping Plan's Mobile Source Strategy and RTP/SCS is discussed above. Excluding transportation sources, the adjusted 2010 baseline GHG inventory for Burbank totals 786,073 MT of CO_2e per year.

AB 32 set a statewide target of reducing GHG emissions to 1990 levels by 2020. Therefore, for the City of Burbank to be consistent with AB 32, baseline annual GHG emissions levels for non-transportation sources would need to be reduced by 15 percent to 1990 levels (approximately 668,162 MT of CO_2e per year) by 2020. In addition, SB 32 set a statewide GHG emission reduction target of 40 percent below 1990 levels by 2030. Therefore, annual GHG emissions levels would need to be reduced by 40 percent below 1990 levels by 2030 to approximately 471,644 MT of CO_2e per year for non-transportation emissions to be consistent with SB 32.

Accordingly, the 2030 project-specific efficiency criteria can be calculated by dividing total citywide GHG emissions by the citywide service population for year 2030. Based on SCAG data, the City's service population was 210,100 persons in 2012 and will be 263,700 persons in 2040. Therefore, using linear interpolation between 2012 and 2040, the City's 2030 service population would be approximately 244,557 persons. Therefore, the 2030 locally-appropriate, project-specific criteria for non-transportation sources would be approximately 1.93 MT of CO_2e per person per year (see Table 4.5-5).

Table 4.5-5 Locally-Applicable Project-Specific Metric for Non-Transportation Sources

Target Year	Value
1990 Baseline Levels[1]	786,073 MT of CO_2e/year
2020 Target (AB 32)[2]	668,162 MT of CO_2e/year
2030 Target (SB 32)[3]	471,644 MT of CO_2e/year
2030 Service Population	244,557 persons
2030 Project-Specific Efficiency Metric	1.93 MT of CO_2e per service person per year

[1] Source: City of Burbank GGRP

[2] AB 32 sets a target of reducing GHG emissions to 1990 levels by 2020 (or 15% percent below baseline levels).

[3] SB 32 sets a target of reducing GHG emissions by 40 percent below 1990 levels by 2030.

Based on CalEEMod results, construction activity for the Project would generate an estimated 13,182 MT CO_2e, as shown in Table 4.5-6. Amortized over a 30-year period, construction of the proposed Project would generate 439 MT CO_2e per year.

Table 4.5-7 combines the annual construction and operational GHG emissions associated with development of the proposed Project (excluding transportation-related emissions).

Table 4.5-6 Estimated Construction Emissions of Greenhouse Gases

Construction Year	Annual Emissions ($MT\ CO_2e$)
2019	615
2020	2,966
2021	1,967
2022	1,919
2023	2,083
2024	2,062
2025	1,570
Total	**13,182**
Amortized over 30 years	439

See Appendix D for CalEEMod results.

Table 4.5-7 Combined Non-Transportation Annual Emissions MT CO2e/year

Emission Source	Project Emissions ($MT\ CO_2e$)
Construction	439
Operational	
Area	10
Energy	2,171
Solid Waste	173
Water	122
Total	**2,915**
Service Population	2,085
Non-Transportation Emissions Per Service Person	**1.40 MT of CO_2e per service person per year**
2030 Project-Specific Non-Transportation Efficiency Criteria	*1.93 MT of CO_2e per service person per year*
Exceed Criteria?	**No**

Source: See Appendix D for CalEEMod results. Values have been rounded.

As demonstrated in Table 4.5-7, Project emissions from all non-transportation sources would total 2,915 MT of CO_2e per year or 1.40 MT of CO_2e per service person per year. Project emissions would not exceed the 2030 locally-appropriate, project-specific criteria for non-transportation sources of 1.93 MT of CO_2e per person per year (see Table 4.5-5).

Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[2] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require the State board to ensure that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency, and reducing water usage.

The emissions modeling in the 2017 Scoping Plan Update has projected 2030 statewide emissions that take into account known commitments (reduction measures) such as SB 375, SB 350 and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Scoping Plan Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Scoping Plan Update, additional measures to achieve the 2030 targets and beyond are outside of the City's or the Project's control. Therefore, any evaluation of post-2030 Project emission would be speculative.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." [3] In the 2017 Scoping Plan Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of

[2] Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.

[3] CARB, Climate Change Scoping Plan: A Framework for Change, December 2008.,p. 117.

efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately." [4]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's GHG emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table 4.5-8 below, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project will be consistent with post-2020 GHG reduction goals. The 2016 RTP/SCS would result in an estimated 8 percent decrease in per capita passenger vehicle GHG emissions by 2020, an 18 percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21 percent decrease in per capita passenger vehicle GHG emissions by 2040. In March 2018, CARB adopted updated targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

The Project is the type of land use development that is encouraged by the 2016 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. As set forth above, the Project's per-capita CO_2 emissions from passenger cars/light duty vehicles would be 14.2 lbs/day per person, a reduction of approximately 40 percent relative to the 2005 SCAG regional baseline levels examined under SB 375. This 40 percent reduction in passenger vehicle per-capita CO_2 emissions exceeds the 21 percent reduction target of the 2016-2040 RTP/SCS as well as the CARB established SB 375 targets of a 13 percent reduction by 2035. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2020 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

Conclusion

Based on the above facts, the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the objectives and emission targets of the City's GGRP and General Plan, SCAG's SCS, and the 2017 Scoping Plan, as well as other applicable plans and policies. Therefore, impacts would be less than significant and mitigation is not required.

[4] CARB, 2017 Scoping Plan Update, November 2017, p. 18

Project Emissions

As discussed above, Section 15064.4 of the CEQA guidelines recommends quantification of a Project's GHG emissions. However, the quantification is being done for informational purposes only and Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant. In support of the above regulatory consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the City's GGRP and General Plan, SCAG's SCS, and the 2017 Scoping Plan, quantitative calculations are provided below.

Table 4.5-8 includes a summary of total Project GHG emissions including amortized construction emissions, and operational emissions. As discussed above, construction emissions associated with construction activity (13,182 MT of CO_2e) are amortized over 30 years. As shown therein, the proposed Project would generate 9,086 MT CO_2e per year.

Table 4.5-8 Estimated Total Emissions of Greenhouse Gases

Emission Source	Project Emissions ($MT\ CO_2e$)
Construction	439
Operational	
Area	10
Energy	2,171
Solid Waste	173
Water	122
Mobile	
CO_2 and CH_4	6,104
N_2O	67
Total	9,086

Mitigation Measures

The Project would be consistent with the City's GGRP and other applicable plans and policies aimed at GHG emissions reduction; therefore, no mitigation measures are required.

c. Cumulative Impacts

Table 3-1 in Section 3, *Environmental Setting*, lists planned and pending developments in Burbank. Such development would incrementally increase overall GHG emissions generated in Burbank and the region. GHG and climate change are by definition cumulative impacts, as they affect the accumulation of greenhouse gases in the atmosphere. As discussed above, the Project would be consistent with applicable plans and programs aimed at reducing GHG emissions. Therefore, the Project's contribution to cumulative GHG emissions would not be considerable.

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7 References

7.1 Bibliography

Section 2 Project Description

United States Green Building Council (USGBC). 2018. *What is WELL?* Available online at: https://www.usgbc.org/articles/what-well.

Section 4.2 Air Quality

Air Quality Dynamics. 2017. 777 North Front Street Project Health Risk Assessment (HRA). June 2017. [Document].

Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. Available online at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

Burbank, City of. 2013. Department of Community Development. Burbank2035 General Plan. Available online at: https://www.burbankca.gov/home/showdocument?id=23448.

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available online at: https://www.arb.ca.gov/ch/handbook.pdf.

California Air Resources Board (CARB). 2016. Ambient Air Quality Standards. Available online at: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.153920632.1342973680.1553199709-244280180.1516298831.

____. 2018. Top 4 Summary at Los Angeles-North Main Street Monitoring Station. Available online at: https://www.arb.ca.gov/adam/topfour/topfourdisplay.php.

California Department of Finance (California DOF). 2018. E-5 Population and Housing Estimates for Cities, Counties, and the State 2011-2018. Available online at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

California Emissions Estimator Model (CalEEMod). Version 2016.3.2. [Computer software].

Fehr & Peers. July 2012. *Burbank Travel Demand Forecasting: Model Development Report*. Available online at: http://www.burbankca.gov/home/showdocument?id=34737

____. 2019. *Transportation Impact Analysis for the 777 North Front Street Project*. March 2019. [Document].

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

____. 2003. Final Localized Significance Threshold Methodology. June 2003. Available online at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2.

____. 2009. Appendix C – Mass Rate LST Look-up Tables. Available online at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

____. 2017. Final 2016 Air Quality Management Plan. Available online at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.

Southern California Association of Governments (SCAG). 2001. Employment Density Study Summary Report. [Document].

____. 2016. 2016 RTP/SCS. Available online at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx

____. 2017. Profile of the City of Burbank. Available online at: https://www.scag.ca.gov/Documents/Burbank.pdf.

Section 4.5 Greenhouse Gas Emissions

American Hotel & Lodging Association. 2015. Lodging Industry Trends 2015. https://www.ahla.com/sites/default/files/Lodging_Industry_Trends_2015.pdf.

Association of Environmental Professionals (AEP). 2017. California Environmental Quality Act (CEQA) Statute and Guidelines.

Burbank, City of. 2013. Greenhouse Gas Reduction Plan *Burbank2035 General Plan.* Available online at: http://www.burbankca.gov/home/showdocument?id=23440.

California Air Pollution Control Officers Association. 2008. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA).

California Air Resources Board (CARB). 2013. Mobile Source Emission Inventory – EMFAC2011 Frequently Asked Questions. January. Available at: https://www.arb.ca.gov/msei/emfac2011-faq.htm

____. 2017a. California Greenhous Gas Emission Inventory – 2017 edition. Available online at: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed July 2018.

____. 2017b. 2020 BAU Emissions Projection. Available online at: https://www.arb.ca.gov/cc/inventory/data/tables/2020_bau_forecast_by_scoping_category_2014-05-22.pdf. Accessed July 208.

____. 2017c. AB 32 Scoping Plan Website. http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed July 2018.

____. 2019. EMFAC 2014 Web Database. Available at: https://www.arb.ca.gov/emfac/2014/

California Climate Action Registry (CCAR). 2009. General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

California Climate Change Center (CCCC). 2006. Climate Scenarios for California. July 2006.

____. 2009. The Impacts of Sea-Level Rise on the California Coast. Available online at: http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF.

California Department of Water Resources (DWR). 2008. Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water. Available online at: https://www.water.ca.gov/LegacyFiles/pubs/planning/managing_an_uncertain_future__climate_change_adaptation_strategies_for_california's_water/managing_an_uncertain_future.pdf

California Energy Commission. 2009. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature. March 2009.

____. 2010. 2009 Power Content Label – Burbank Water and Power. https://www.energy.ca.gov/pcl/labels/2009_labels/Burbank%202009%20PCL.pdf.

____. 2018. 2017 Power Content Label – Burbank Water and Power. https://www.energy.ca.gov/pcl/labels/2017_labels/Burbank_2017_PCL.pdf

California Environmental Protection Agency, March 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Available online at: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDFappen.

____.2010. Climate Action Team Biennial Report. Final Report. April 2010.

Intergovernmental Panel on Climate Change (IPCC). 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

____. 2014. Summary for Policymakers. In: Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Parmesan, C. August 2006. Ecological and Evolutionary Responses to Recent Climate Change.

South Coast Air Quality Management District (SCAQMD). 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. October 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf (accessed May 2019).

United Nations Intergovernmental Panel, 2014. Climate Change 2014 Synthesis Report Summary for Policymakers. Available online at: https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

United States Environmental Protection Agency (USEPA) February 14, 2017a. Understanding Global Warming Potentials. Available online at: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

____.2017b. Criteria Air Pollutants. Available online at: https://www.epa.gov/criteria-air-pollutants.

Visit Burbank. 2018. Accomplishments FY 2017-2018 Looking Ahead 2018-2019. Available online at: https://www.visitburbank.com/wp-content/uploads/2018/10/2017-18vb_annual_report_vf6_lowres.pdf

7.2 List of Preparers

This Recirculated Draft EIR was prepared by the City of Burbank, with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR are listed below.

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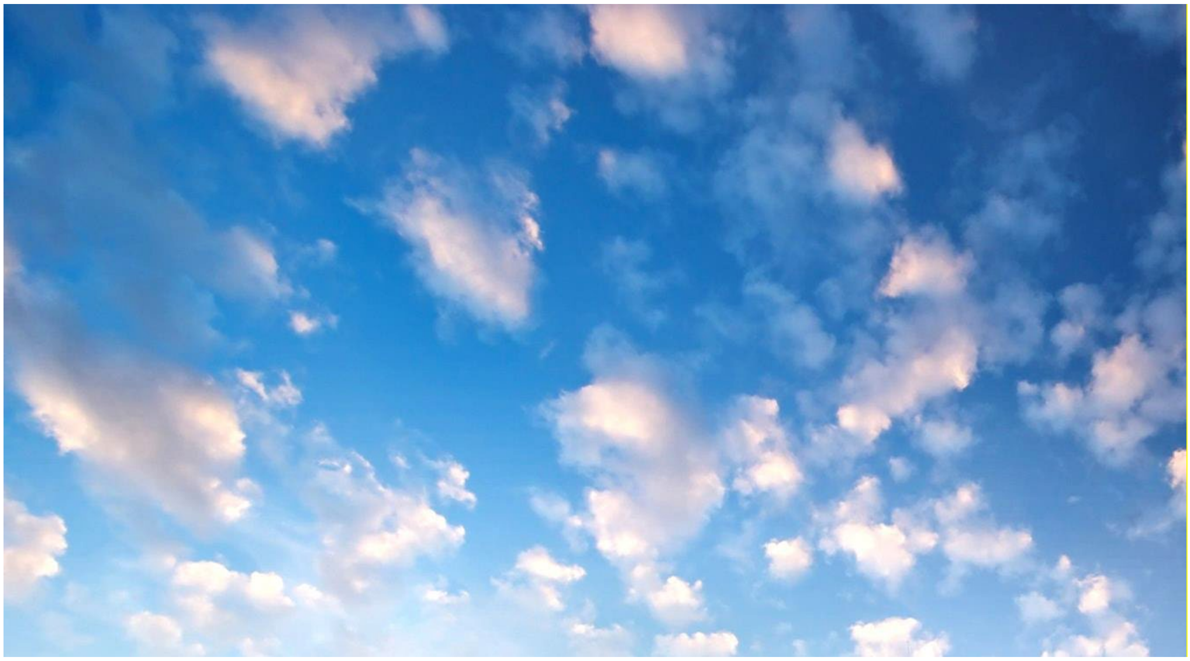
Appendix D

Air Quality and Greenhouse Gas Study



777 North Front Street Project

Air Quality and Greenhouse Gas Study

prepared for
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150 North Third Street
Burbank, California 91502

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July 2019

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1 Project Description

1.1 Introduction

This study analyzes the potential air quality and greenhouse gas (GHG) impacts of the proposed mixed-use project (Project) located at 777 North Front Street, on the corner of North Front Street and West Burbank Boulevard in the City of Burbank, California. This report has been prepared by Rincon Consultants, Inc., under contract to the City of Burbank, in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the proposed Project's air quality and GHG impacts related to both temporary construction activity and long-term operation of the project. Traffic projections used in emissions estimates are based on the Traffic Impact Study prepared by Fehr and Peers dated March 2019. The traffic study is included as Appendix J of the DEIR. In addition, the analysis included in the air quality section of this report relies in part on the 777 North Front Street Mixed Use Development Project Health Risk Assessment (HRA) Completed by Air Quality Dynamics in June 2017. The HRA is included as Appendix C of the DEIR.

1.2 Project Summary

Project Background

The Project site encompasses approximately eight acres. The site is an irregularly-shaped parcel and is currently occupied predominately by concrete slabs and an abandoned section of old Front Street. The Project site is generally bounded by Old Front Street and the Interstate 5 Golden State Freeway (I-5) to the northeast, Magnolia Boulevard to the southeast, N. Front Street to the southwest, and Burbank Boulevard to the northwest. The Project site is primarily surrounded by industrial uses to the west and southwest across North Front Street, including the United Water Services treatment facility located approximately 150 feet to the southwest. Commercial development, including Burbank Town Center, restaurants, and other retail uses, are located to the northeast across Burbank Boulevard, east across the I-5 freeway and south across East Magnolia Boulevard. Existing site conditions are shown in Figure 1.

Proposed Project

The Project would involve clearing and excavation of the site and construction of three buildings: two residential buildings and one building for a hotel. The residential component of the Project would include construction of one 279,162 square-foot, seven-story building containing 252 units and one 346,644 square-foot, eight-story building containing 321 units for a total of 573 residential units. In addition, a total of 1,143 parking spaces would be provided for tenants of both residential buildings (this total does not include the 63 tandem spaces). The Project would also include 106,400 square feet of open space, including courtyards, a pool deck, public plaza, and private balconies. Approximately 87,050 square feet would be common open space, a minimum of approximately 15 percent of which would be landscaped. Associated residential common areas and amenities constructed may include, but would not limited to a rooftop terrace, business center/internet café, coffee bar, demonstration kitchen, billiards room, resident lounge, fitness center with indoor exercise studio, resort-style pools with cabanas, Jacuzzis, public plaza and bike trail access, pet grooming station, pet park, concierge services, and bike storage. Residential courtyards and balconies would be located within the interior sides of the buildings.

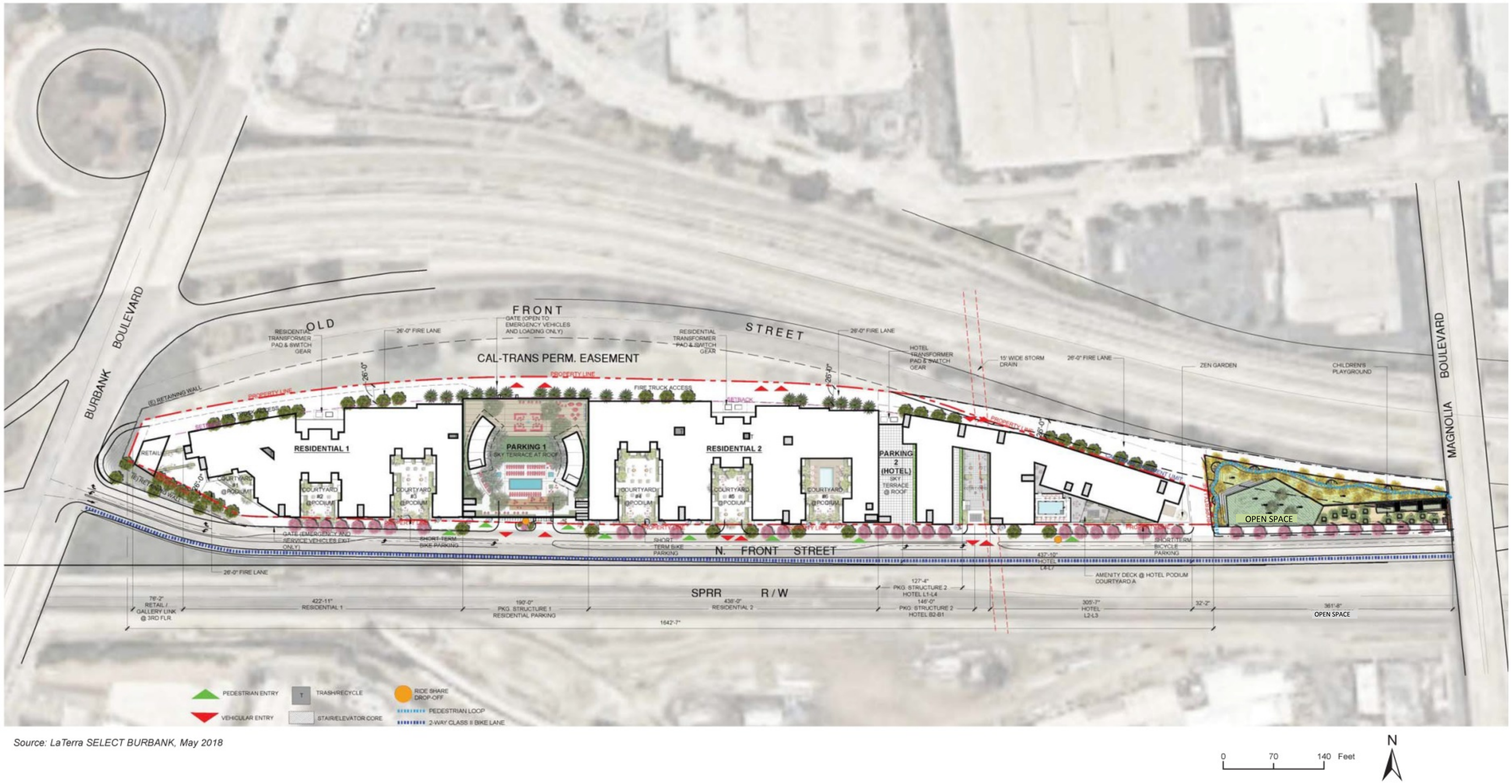
The hotel component of the Project would include construction of one 212,350 square-foot, seven-story building at the southeastern end of the Project site containing 307 hotel rooms and ancillary uses and 307 associated parking spaces (this total does not include the 20 tandem spaces). Associated hotel amenities may include, but would not be limited to 1,800 sf of restaurant space, café, bar, pool terrace, fitness center, meeting rooms, and lounge. The hotel's ancillary commercial uses would include accessory retail and restaurant uses on the ground floor. In addition, a 1,067-square foot retail gallery would be provided on Front Street near the intersection of Burbank Boulevard, which would have four total parking spaces. Additional ancillary uses would include public and private recreational spaces consisting of courtyards, residential balconies, and sky terraces at both parking structure roof levels. The Project would include a publicly accessible plaza area on the City-owned property on the southern portion of the site. The plaza would be approximately 27,800 square feet.

See Figure 1 for existing conditions and configuration of the site and Figure 2 for a visual overlay of the site plans on the existing site.

Figure 1 Existing Site Conditions

Imagery provided by Microsoft Bing and its licensors © 2018.

Figure 2 Site Plan Overlay



Source: LaTerra SELECT BURBANK, May 2018

2 Air Quality

2.1 Background

2.1.1 Local Climate and Meteorology

The Project site is in the South Coast Air Basin (Basin or SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego County line to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as the San Gorgonio Pass area in Riverside County. The regional climate in the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles and other modes of transportation, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when high winds suspend fine dust particles.

2.1.2 Air Quality Regulation

The federal and State governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent under the California EPA. County-level Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs/AQMDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide, including the SCAB.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (CAAQS) for these and other pollutants, some of which are more stringent than the federal standards.

The South Coast Air Quality Management District (SCAQMD or District) is the designated air quality control agency for the Basin. The Basin is designated a nonattainment area for the federal and State one-hour and eight-hour ozone standards, the State PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, and the State and federal annual $PM_{2.5}$ standard. The Basin is in attainment of all other federal and State standards. Table 1 provides the federal and State ambient air quality standards.

Table 1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	N/A[1]	0.09 ppm[2]
	8-Hour	0.070 ppm	0.070 ppm
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	Annual	0.03 ppm	N/A
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	N/A	20 µg/m[3]
	24-Hour	150 µg/m	50 µg/m
$PM_{2.5}$	Annual	12 µg/m	12 µg/m
	24-Hour	35 µg/m	N/A
Lead	30-Day Average	N/A	1.5 µg/m
	3-Month Average	0.15 µg/m	N/A

[1] N/A: Not applicable because no standard is currently established for California
[2] ppm = parts per million
[3] µg/m = micrograms per cubic meter
Source: CARB 2016

Characteristics of ozone, CO, NO_2, and suspended particulate matter are described below.

Ozone

Ozone (O_3) is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG).[1] NO_X is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans

[1] 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, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant that is found in high concentrations only near the source. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) 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_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 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_{10} and acid rain.

Suspended Particulates

PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ 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 ($PM_{2.5}$) 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.

Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The 2016 AQMP, adopted on March 3, 2017, incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012

AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015.

The 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models (SCAQMD 2017). This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also includes attainment demonstrations of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements.

2.1.3 Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the Basin. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The monitoring station located closest to the Project site is the Los Angeles-North Main Street station approximately 9.5 miles southeast of the Project site. Table 2indicates the number of days that each of the standards has been exceeded at that station.

As shown in Table 2, the eight-hour ozone concentration exceeded both State and federal standards on six days in 2015, four days in 2016, and 14 days in 2017. The ozone concentration exceeded State one-hour standards on two days in both 2015 and 2016, as well as six days in 2017. The $PM_{2.5}$ concentration exceeded standards on seven days in 2015, two days in 2016, and six days in 2017. No exceedances of federal standards for NO_2 or PM_{10} have occurred at the monitoring station in the last three years; however, the State PM_{10} standard was exceeded 30 times in 2015, 21 times in 2016, and 40 times in 2017.

Table 2 Ambient Air Quality at the Monitoring Station

Pollutant	2015	2016	2017
8 Hour Ozone (ppm), 8-Hr Maximum	0.074	0.078	0.086
Number of Days of State exceedances (>0.070)	6	4	14
Number of days of Federal exceedances (>0.070)	6	4	14
Ozone (ppm), Worst Hour	0.104	0.103	0.116
Number of days of State exceedances (>0.09 ppm)	2	2	6
Number of days of Federal exceedances (>0.124 ppm)	0	0	0
Nitrogen Dioxide (ppm) – Worst Hour	0.0791	0.0647	0.0806
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of Federal exceedances (0.10 ppm)	0	0	0
Particulate Matter 10 microns, $\mu g/m^3$, Worst 24 Hours	73.0	64.0	64.6

Pollutant	2015	2016	2017
Number of days above Federal standard (>150 μg/m^3)	0	0	0
Number of days of State exceedances (>50 μg/m^3)	30	21	40
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours	56.4	44.3	54.9
Number of days above Federal standard (>35 μg/m^3)	7	2	6

Source: CARB 2018

Note: As of March 15, 2019, 2018 data is not yet available.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a 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 under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools, hospitals, and residences.

The Project site is primarily surrounded by industrial and commercial uses that are not considered sensitive receptors likely to be affected by air pollutant emissions associated with the Project. The nearest sensitive receptors are multi-family residences at the Burbank Collection Condos, over 750 feet east of the Project site, and single family residences along Scott Road approximately 0.2 mile northwest of the Project site. The next closest receptors include Burbank High School approximately 0.3 mile northeast of the Project site, and the grouping of Downtown Burbank Hotels which include, Holiday Inn, Residence Inn by Marriott, Hilton Garden Inn, and SpringHill Suites by Marriott located approximately 0.4 mile southeast of the Project site. Additional residential uses are also located 0.4 mile west and 0.2 mile southeast of the Project site, and multifamily residences located at 0.2 mile southeast of the Project site.

2.2 Impact Analysis

2.2.1 Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993) as well as additional guidance published by SCAQMD. The handbook includes thresholds for emissions associated with both construction and operation of the Project. The Project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the Project's land uses, square footages for different uses (e.g., residential, hotel, parking, etc.), and location, to estimate a project's construction and operational emissions from new development. The Project includes developing two mixed-use buildings with 573 residential units and 1,067 sf of retail gallery space, and one mid-rise hotel with 307 rooms and ground floor retail/restaurant uses. Construction of the Project is expected to occur over five years. The entire Project site would be graded and approximately 127,000 cy of soil would be exported from the Project site.

Construction Emissions Methodology

The California Emissions Estimator Model (CalEEMod version 2016.3.2) was used to estimate air pollutant emissions associated with Project construction. Construction activities associated with this development would result in temporary air quality impacts that may vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Exhaust from internal combustion engines used by construction equipment and hauling trucks (dump trucks), vendor trucks (delivery trucks), and worker vehicles would result in emissions of NO_X, ROC, CO, SO_x, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce ROC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD’s Rule 1113 (Architectural Coatings). The Project would also be required to comply with SCAQMD’s Rule 403, which requires watering at least twice a day during active operations (e.g., demolition, construction, earth-moving activities, etc.) in order to reduce fugitive dust emissions (Fugitive Dust).

Project emissions were modeled based on a 8.09-acre site with development of two mixed-use residential buildings with 573 residential units, a 1,537 space parking structure, 1,067 square feet (sf) of retail uses, a hotel with 307 rooms with a 1,800 sf high turn-over restaurant, café/bar, swimming pool, fitness center, and a 27,800 square-foot area of public open space. Construction of the Project is expected to take approximately 61 months (starting in the beginning of September 2019 and going through the end of September 2025), with full operation assumed to begin in 2026, the first full year after the end of construction. Construction would involve site preparation, grading, excavation, building construction, paving and architectural coating. Demolition was not included as a construction phase as the Project site is currently vacant and does not contain any existing development. However, the existing concrete pad covering the site would be removed and either ground up and used onsite where applicable or exported from the site. Based on applicant provided information, total grading of the Project site, including removal of the concrete pad, would result in approximately 127,000 cubic yards (cy) of cut soil that would be exported from the site. Additionally, it was assumed that grading would occur over the entire Project site due to excavation activities required to construct the proposed subterranean parking. Given an estimated haul truck capacity of 16 cy (consistent with the CalEEMod default assumption for truck capacity), approximately 7,938 outbound haul trucks (equivalent to 15,876 total truck trips) would be required for soil export. Approximately 32,000 cy of the total exported soil is conservatively assumed to be contaminated, requiring hauling to Kettleman Hills Landfill, approximately 170 miles from the project site. The remainder of the exported soil (95,000 cy) would be transported to Simi Valley Landfill, approximately 30 miles from the Project site. This was incorporated into CalEEMod using a weighted hauling trip length of 65.3 miles for all one-way hauling trips.

Operational Emissions Methodology

CalEEMod was used to estimate air pollutant emissions from mobile sources associated with the Project. CalEEMod default data, including temperature, trip characteristics, variable start information, emission factors, and trip distances, were used for the model inputs. The estimate of vehicle trips associated with the Project is from the *Transportation Impact Analysis* prepared by Fehr and Peers (Appendix J of the DEIR).

CalEEMod was also used to estimate emissions from the Project area sources that include space and water heating, gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for building maintenance. Emissions attributed to energy use include natural gas consumption for space and water heating[2]. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Emissions for the 573-unit apartment buildings and the 307-unit mid-rise hotel were based on CalEEMod defaults.

Residential Building 1 would be operational in 2022 and occupied before completion of all construction activities. The operational analysis includes an additional scenario to consider overlap of Residential Building 1 operation, starting in 2022, and construction from 2022 to 2025. For the purposes of this scenario, it was assumed that in addition to the residential units in Building 1 (252 units), the associated parking garage and pool would also be operational.

2.2.2 Regional Thresholds

To determine whether a project would have a significant impact to air quality, Appendix G of the CEQA Guidelines questions whether a project would:

1) Conflict with or obstruct implementation of the applicable air quality plan;
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3) 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);
4) Expose sensitive receptors to substantial pollutant concentrations; and
5) Create objectionable odors affecting a substantial number of people.

The SCAQMD recommends the following quantitative regional significance thresholds for temporary construction activities and long-term project operation within the Basin:

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

2.2.3 Localized Significance Thresholds

In addition to regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area

[2] Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. Therefore, CalEEMod does not calculate a project's operational emissions from consumption of electricity.

(SRA), project size, and distance to the sensitive receptor. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD 2003). As such, LSTs for operational emissions do not apply to onsite development, as the majority of emissions would be generated by cars on the roadways.

LSTs have been developed for emissions in construction areas up to five acres in size. The SCAQMD provides lookup tables for Project sites that measure one, two, or five acres. The Project involves an 8.09-acre disturbance area. As it is unlikely that more than five acres of the site would be under construction on any given day, LSTs for a five-acre Project site were used to provide a more conservative estimate. Because the Project site is located in SRA 7, LSTs for construction in SRA 7 are shown in Table 3. LSTs are provided for receptors at a distance of 82 to 1,640 feet (at 25, 50, 100, 200, and 500 meters) from the Project site boundary. As discussed in the *Setting*, the closest sensitive receptors are multi-family residences located over 750 feet east of the Project site. A receptor distance of 200 meters (656 feet) was used to provide a more conservative analysis.

Table 3 SCAQMD LSTs for Construction (SRA-7)

Pollutant	Allowable emissions from a 5-acre site in SRA-7 for a receptor 656 feet away
Gradual conversion of NO_X to NO_2	194
CO	4,119
PM_{10}	84
$PM_{2.5}$	28

Source: SCAQMD 2008

2.2.4 Regulatory Requirements and Project Design Features

The Project would comply with all applicable regulatory standards. In particular, the Project would comply with the most current CALGreen Code, in addition to SCAQMD Rules 403 and 1113, and all other applicable provisions of the SCAQMD. Rules 403 and 1113 were added as mitigation in CalEEMod, as discussed below. CALGreen standards include indoor water usage reduction, regulation of outdoor water usage, and construction waste reduction.

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. For the purposes of construction emissions modeling, it was assumed that the project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the Basin. Therefore, the following conditions that would be required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod for the 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 onsite

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.

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 onsite 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.

The architectural coating phase involves the greatest release of ROG. The emissions modeling for the proposed Project also includes the use of low-VOC paint (50 grams per liter (g/L) for non-flat coatings) as required by SCAQMD Rule 1113.

In addition, the following project design features (PDF) are proposed with regard to air quality emissions:

Air Quality PDF 1 – CAL Green Building Standards Code

The Project shall incorporate the requirements of the CAL Green Building Standards Code. The Project shall be provided with minimum Tier 1 or LEED Gold certification. The Green Building Plan shall be submitted to the Chief Building Official for review.

Air Quality PDF 2 – Energy Star Appliances

Developer shall install Energy Star or equivalent appliances or equivalent energy-efficient appliance models in new residential units, which shall include a standard-size refrigerator in each unit. Installation of Energy Star or equivalent appliances shall be demonstrated to the satisfaction of the CDD Director prior to issuance of certificate of occupancy.

Air Quality PDF 3 – Air Quality Control Measures

1. Prior to issuance of any building permits for any phase, the Developer shall incorporate the following as project design features in each phase of the Project:
    a. Prior to any building permit (for each phase), the Developer shall install, operate, and maintain an HVAC system that utilizes high-efficiency filters with Minimum Efficiency Reporting Value (MERV) 15 minimum or higher for the residential units.
        i. Developer may prepare and submit an air quality engineering study (for a unit-by-unit analysis) related to the MERV filtration system(s) that must be incorporated into the Project. Individual units may be provided a MERV 13, MERV 14 or MERV 15 (but not less than MERV 13) filtration system depending on the recommendations of the air quality study (i.e., depending on proximity

to freeway and exposure levels); developer shall pay for 3rd party air quality expert to review submitted air quality engineering study

ii. If the Developer elects to not prepare and submit an air quality engineering study (for a unit-by-unit analysis), then a minimum of MERV 15 shall be required for every residential unit in each building/phase.

iii. HVAC systems with the specified MERV filter ratings are required elements of the Project design, and must be incorporated at the time of original construction.

b. Locate the air intakes for the residential units as far from the freeway as practicable. Precise location will be ascertained and reviewed during Plan Check prior to issuance of any building permit for each phase.

c. Provide a written notice to all new residents and tenants that disclose the potential risk from living in close proximity to a freeway, and that opening unit windows may reduce the effectiveness of the air filtration system and increases their individual exposure.

d. Plant vegetation between residential receptors and the freeway (e.g., rear yard setback areas for each phase).

2. Prior to the issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce the short-term fugitive dust impacts on nearby sensitive receptors.

   a. Prohibit truck idling in excess of five minutes, on-site and off-site;
   b. All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the Project site to prevent excessive amounts of dust;
   c. Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
   d. Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
   e. All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
   f. Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
   g. Gravel bed trackout aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
   h. On-site and unpaved-road vehicle speed shall be limited to 15 miles per hour;
   i. All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized;
   j. Visible dust beyond the property line which emanates from the Project shall be prevented to the maximum extent feasible;
   k. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
   l. Reroute construction trucks away from congested streets or sensitive receptor areas;
   m. Track-out devices shall be used at all construction site access points;
   n. All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;

o. Sweep streets at the end of the day with SCAQMD Rule 1186 and 1186.1 compliant sweepers if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water);
p. Re-route construction trucks away from congested streets or sensitive receptor areas;
q. The Project proponent shall survey and document the proposed Project's construction areas and identify all construction areas that are served by electricity. Onsite electricity, rather than temporary power generators, shall be used in all construction areas that are demonstrated to be served by electricity.

2.2.5 Local Regulations

The City of Burbank 2035 General Plan Air Quality and Climate Change Element contains the following goals and related policies specific to air quality:

Goal 1: **Reduction of Air Pollution**

Policy 1.1. Coordinate air quality planning efforts with local, regional, state, and federal agencies, and evaluate the air quality effects of proposed plans and development projects.

Policy 1.2. Seek to attain or exceed the more stringent of federal or state ambient air quality standards for each criteria air pollutant.

Policy 1.3. Continue to participate in the Cities for Climate Protection Program, South Coast Air Quality Management District's (SCAQMD's) Flag Program, SCAQMD's Transportation Programs (i.e., Rule 2202, Employee Rideshare Program), and applicable state and federal air quality and climate change programs.

Policy 1.4. Cooperate with the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and the SCAQMD to measure air quality at emission sources (including transportation corridors), and enforce the provisions of the Clean Air Act, as well as state and regional policies and established standards for air quality.

Policy 1.5. Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air quality and greenhouse gas mitigation in project design.

Policy 1.6. Require measures to control air pollutant emissions at construction sites and during soil- disturbing or dust-generating activities (i.e., tilling, landscaping) for projects requiring such activities.

Policy 1.9. Encourage the use of zero-emission vehicles, low emission vehicles, bicycles, non-motorized vehicles, and car-sharing programs. Consider requiring sufficient convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.

Policy 1.12. Provide public information describing air quality standards, health effects, and efforts that residents and businesses can make to improve regional air quality. Encourage businesses and residents to participate in SCAQMD's public education programs.

Goal 2. Sensitive Receptors

Policy 2.2. Separate sensitive uses such as residences, schools, parks, and day care facilities from sources of air pollution and toxic chemicals. Provide proper site planning and design features to buffer and protect when physical separation of these uses is not feasible.

Policy 2.3. Require businesses that cause air pollution to provide pollution control measures.

Policy 2.4. Reduce the effects of air pollution, poor ambient air quality, and urban heat island effect with increased tree planting in public and private spaces.

Policy 2.5. Require the use of recommendations from the California Air Resources Board's Air Quality and Land Use Handbook to guide decisions regarding location of sensitive land uses.

2.2.6 Construction Impacts

Construction emissions are generally referred to as temporary impacts of a project, but have the potential to represent a significant impact with respect to air quality. Fugitive dust emissions are among the pollutants of greatest concern with respect to construction activities. These emissions from construction activities can lead to adverse health effects and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. General site grading operations are the primary sources of fugitive dust emissions. However, these emissions can vary greatly, depending on the level of activity, the specific operations taking place, the number and types of equipment operated, vehicle speeds, local soil conditions, weather conditions, and the amount of earth disturbance from site grading and excavation.

Emissions of ozone precursors NO_X and ROG are primarily generated by the operation of off-road construction equipment and mobile sources such as delivery vehicles and construction worker vehicles. Generation of these emissions vary as a function of the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation, as well as vehicle trips per day associated with delivery of construction materials, the export of soil, vendor trips, and worker commute trips.

Based on the CalEEMod results for the proposed Project, Table 4 summarizes the estimated maximum daily emissions of pollutants during the construction period with compliance with of the requirements described above for Rules 403 and 1113, but without any additional mitigation.

Table 4 Estimated Construction Emissions

	Maximum Emissions[1] (lbs/day)				
Construction Year	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
2019 Maximum	5.7	160.3	53.9	38.1	11.5
2020 Maximum	5.4	150.2	55.4	17.4	6.3
2021 Maximum	5.0	36.5	52.3	11.0	3.7
2022 Maximum	4.8	35.3	49.7	11.0	3.7
2023 Maximum	13.8	32.3	53.7	12.9	4.2
2024 Maximum	13.6	32.0	51.5	12.9	4.2
2025 Maximum	14.0	43.0	67.1	13.6	4.9

Maximum	**14.0**	**160.3**	**67.1**	**38.1**	**11.5**
SCAQMD Regional Thresholds	75	100	550	150	55
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**
Maximum Onsite	**8.7**	**19.1**	**23.0**	**9.1**	**5.4**
SCAQMD LSTs Thresholds[2]	N/A	194	4,119	84	28
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**

Notes: All calculations were made using CalEEMod. See the Appendix for calculations. Site Preparation, Grading, Paving, Building Construction, and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features that will be included in the Project.

[1] Grading phases incorporate anticipated emissions reductions, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions, which are required by Rule 1113.

[2] LSTs are for a 5-acre project in SRA-7 within a distance of 200 feet from the site boundary.

As shown above, emissions of CO, PM_{10}, $PM_{2.5}$, and ROG would not exceed SCAQMD regional or LST thresholds, assuming adherence to the conditions listed above required by SCAQMD Rule 403 and SCAQMD Rule 1113. However, maximum daily NO_X emissions generated during Project construction would be approximately 160 lbs/day during construction in 2020, which would exceed SCAQMD thresholds. Therefore, mitigation would be required to reduce maximum daily NO_x emissions to below threshold levels.

Mitigation Measure

Temporary impacts associated with construction-related NO_X emissions would be reduced through implementation of the following mitigation measure.

AQ-2 High Efficiency Truck Engines

All haul trucks used during construction shall have engine model years between 2010 and 2018 to ensure that all truck engines have higher average total fuel efficiency.

Significance After Mitigation

Mitigation Measure AQ-2 requires the use of hauling trucks with engines having higher average total fuel efficiency. Using engine emission factors provided on the CARB EMFAC Web Database, use of recent engine models would result in fewer emissions per mile traveled when transporting exported soil, therefore yielding lower daily NO_X emissions. Using heavy duty truck engines with model years 2010 through 2018 would reduce maximum daily NO_X emissions associated with hauling by approximately 80 lbs/day during the worst day from 145 lbs/day to 65 lbs/day (see calculation details in the Appendix). The combined maximum daily construction emissions on the worst day for offsite emissions sources, including hauling, and onsite sources would be 80 lbs/day of NO_X, which would be below the threshold of 100 lbs/day of $NO_{X.}$ Because implementation of Mitigation Measure AQ-2 would reduce NO_x emissions to be below SCAQMD thresholds, residual impacts would be less than significant. In addition, implementation of Mitigation Measure AQ-3 below, which requires implementation of Tier 4 construction equipment for all construction activities that overlap with building occupancy, would further reduce NO_X emissions during construction activities.

2.2.7 Long-Term Regional Impacts

AQMP Consistency

A project may be inconsistent with the AQMP if it would generate a considerable increase in regional air quality violations and affect the region's attainment of air quality standards, or if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. The 2016 AQMP incorporates local city general plans and the Southern California Association of Government's (SCAG) 2016 RTP socioeconomic forecast projections of regional population, housing and employment growth.

The proposed Project involves the construction of a mixed-use residential development which would cause a direct increase in the City's population. The proposed Project would also involve development of a hotel, which would not directly increase the City's population as the purpose of this facility is to temporarily house visitors and would not generate permanent residents. However, operation of the hotel would require hiring employees. Although staff would likely come from the existing labor force, it is possible that all staff members would be newly generated employees, which would contribute to the City's regional employment growth. According to data provided to the City by the California Department of Finance (DOF), the current population of the city is 107,149, and the average household size is 2.5 persons (DOF 2018). In result, development of 573 residential units would generate approximately 1,433 new residents (573 dwelling units x 2.5 residents/dwelling unit). According to the SCAG Employment Density Study Summary, hotels in Los Angeles County have an average of 51.91 employees per acre of floor area and commercial developments have an average of one employee per 424 square feet of floor area (SCAG 2001). Based on these averages, the hotel would generate about 244 employees and the gallery would generate about three employees. The total estimated number of employees associated with the proposed Project is therefore 247. It is assumed that not all employees would become new residents of Burbank (they may, for example, already live in the City or live outside of the City after they are hired). According to SCAG's 2016 RTP/SCS, the City's population is forecasted to increase to approximately 118,700 by 2040, which is an increase of 13,667 persons from the current population (SCAG 2016). The addition of 1,433 residents in the Project area would constitute about 11 percent of the City's total projected population growth. For employment within the City, SCAG's 2017 Local Profiles Report for the City of Burbank estimated the City's total jobs to be 112,656 in 2015, and estimates an increase to 145,000 jobs in 2040 in their 2016 RTP/SCS forecasts. Thus, employment is expected to increase by approximately 29 percent (32,344 employees) between 2015 and 2040 (SCAG 2017). The possible addition of 247 new employees would comprise approximately one percent of this increase. Therefore, employment growth generated by the proposed Project would be within the SCAG 2016 employment growth forecasts. Because the proposed Project would not directly generate substantial population growth, and possible employment growth would be within SCAG regional growth projections, the proposed Project would not conflict with the AQMP.

Operational Air Pollutant Emissions

Long-term operational emissions associated with the Project are those attributed to vehicle trips (mobile emissions), the use of natural gas and electricity (energy source emissions), and consumer products, architectural coatings, and landscape maintenance equipment (area source emissions). CalEEMod was used to calculate emissions based on the proposed land uses for the Project site and the number of trips generated.

Table 5 summarizes the Project's operational emissions. The majority of Project-related operational emissions would be due to vehicle trips to and from the Project site.

Table 5 Estimated Operational Emissions

	Estimated Emissions (lbs/day)					
Emissions Source	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Area	20.4	0.5	47.4	<0.1	0.3	0.3
Energy	0.3	3.1	1.9	<0.1	0.2	0.2
Mobile	8.3	38.5	102.9	0.4	40.7	11.1
Project Total	29.1	42.1	152.2	0.4	41.2	11.6
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix for CalEEMod computer model output. Note: Numbers may not add due to rounding.

As shown in the Table 5, Project-generated emissions would not exceed SCAQMD recommended thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. Therefore, impacts would be less than significant.

As discussed in Section 1, *Project Description*, Residential Building 1 would be operational in 2022 and occupied before completion of all construction activities. Therefore, this operational analysis also considers overlapping emissions from operation and construction in years 2022 through 2025, as summarized in Table 6.

Table 6 Estimated Overlapping Operation and Construction Emissions between 2022 and 2025

	Estimated Emissions (lbs/day)					
Year	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2022	14.6	50.5	108.4	0.3	23	7.1
2023	23.6	47.5	112.4	0.3	24.9	7.6
2024	23.4	47.2	110.2	0.3	24.9	7.6
2025	23.8	58.2	125.8	0.3	25.6	8.3
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**	**No**

See Appendix for CalEEMod computer model output. Note: Numbers may not add due to rounding.

As shown in the Table 6, Project-generated emissions in years when construction and operation of Building 1 overlap would not exceed SCAQMD recommended thresholds for ROG, CO, SO_X, PM_{10}, or $PM_{2.5}$. However, maximum daily NO_X emissions during overlapping construction and operation of

Building 1 would exceed SCAQMD operational thresholds in 2025. Therefore, mitigation would be required to reduce maximum daily NO_X emissions to below threshold levels.

Mitigation Measures

Temporary impacts associated with NO_X emissions from overlapping construction phases and operation of Building 1 would be reduced through implementation of the following mitigation measure.

AQ-3 NO_x Reduction from Combined Operational and Construction Emissions

All off-road diesel-powered construction equipment shall meet or exceed the CARB and U.S. EPA Tier 4 off-road emissions standards for equipment rated at 50 horsepower or greater during construction activities that overlap with building occupancy. Contractors shall demonstrate the ability to supply compliant equipment for review and approval by the City prior to the commencement of any construction activities and issuance of building occupancy permits. A copy of each unit's certified tier specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. If use of Tier 4 construction equipment is not feasible, the contractor shall provide evidence that Tier 4 construction equipment is not feasible and shall provide a report to the City for review and approval, demonstrating that other technologies/strategies would reduce emissions from overlapping construction and operational phases to below SCAQMD's operational thresholds. Alternative applicable strategies may include, but would not be limited to, Tier 3 construction equipment, reduction in the number and/or horsepower rating of construction equipment, limiting the number of daily construction haul truck trips to and from the Project, and/or limiting the number of individual construction project phases occurring simultaneously, if applicable. If it cannot be demonstrated that emissions during construction activities that overlap with building occupancy would not exceed SCAQMD's operational thresholds, then building occupancy shall be delayed until all construction activities are complete.

Significance After Mitigation

Mitigation Measure AQ-3 requires the use of Tier 4 construction equipment during construction activities that overlap with building occupancy or implementation of alternative strategies to ensure that emissions during overlapping operational and construction phases do not exceed SCAQMD operational thresholds. As shown in Table 7, implementation of Tier 4 construction equipment during construction activities that overlap with building occupancy would reduce combined emissions during overlapping construction and operational phases to below SCAQMD's operational thresholds. Delaying building occupancy until all construction activities are completed would prevent overlapping construction and operational phases and the associated potential exceedance of SCAQMD thresholds. With implementation of Mitigation Measure AQ-3, residual impacts would be less than significant.

Table 7   Estimated Overlapping Operation and Construction Emissions between 2022 and 2025

Year	Estimated Emissions (lbs/day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2022	14.2	38.5	108	0.3	22.2	6.2
2023	23.2	34.3	112	0.3	23.9	6.7
2024	23	34	109.8	0.3	23.9	6.7
2025	23.2	34.9	125.4	0.3	24.1	6.8
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix for CalEEMod computer model output. Note: Numbers may not add due to rounding.

Local Carbon Monoxide Concentration

A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

According to traffic volumes in the *Transportation Impact Analysis* prepared by F&P for the closest intersection to the Project site, the daily traffic count for the Front Street/Burbank Boulevard intersection is approximately 51,180 vehicles. The Project would add approximately 3,460 daily trips to this intersection, resulting in approximately 54,640 daily vehicles (F&P 2019). Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there would be more vehicle trips under the Project than under existing conditions, Project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO.

In addition, the Bay Area Air Quality Management District (BAAQMD) has established a screening threshold. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). The trips generated by the Project would be well below the threshold and would not cause the intersection to host 100,000 vehicles per day, which was the level of traffic at the worst case intersection analyzed by SCAQMD in the 2003 AQMP that also did not result in a CO impact. Localized air quality impacts related to CO hot spots would therefore be less than significant.

Odors

The CARB *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints. The Project would primarily involve development of two mixed-use residential buildings, a parking structure, a hotel, along with associated open space and landscaping. None of these uses are identified as land uses associated with odor complaints by SCAQMD; therefore, the Project would not generate objectionable odors affecting a substantial number of people.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. As the Project site is in an area without tall buildings to block air movement and hold odors, construction-related odors would disperse and dissipate fairly quickly and would not cause substantial odors at the closest sensitive receptors. In addition, any construction-related odors would be relatively short-term in any event and would cease upon completion of construction. Therefore, impacts related to objectionable odors during construction or operation would be less than significant.

Construction Dust

As described under Impact AQ-2, Project construction emissions would not exceed SCAQMD or LST daily thresholds, with implementation of the proposed mitigation measure. The nearest existing sensitive receptors to the area proposed for construction include multi-family residences at the Burbank Collection Condos over 750 feet east of the Project site, single-family residences approximately 0.2 mile northwest of the Project site along Scott Road, Burbank high school approximately 0.3 mile northeast of the Project site, and the Hilton Burbank hotel approximately 0.4 mile southeast of the Project site, as discussed under the subsection above Sensitive Receptors. To provide a more conservative analysis, LSTs used in this analysis considered a receptor distance of 656 feet (200 meters), although the nearest sensitive receptor is over 750 feet from the Project site.

As shown in Impact AQ-2, the highest daily PM_{10} emissions associated with Project construction would not exceed the SCAQMD's threshold of 150 pounds per day or the SCAQMD's LST threshold of 84 pounds per day. Likewise, the highest daily $PM_{2.5}$ emissions associated with Project construction would not exceed the SCAQMD's threshold of 55 pounds per day or the SCAQMD's LST threshold of 28 pounds per day. This estimate for PM_{10} emissions included the following assumptions, compliant with the SCAQMD Rule 403, during 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 onsite 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.
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 onsite driveways and adjacent streets and roads at least once per day, preferably

Therefore, the Project would have a less than significant impact on sensitive receptors.

Toxic Air Contaminants (TACs)

The greatest potential for toxic air contaminants (TAC) emissions during construction would be from diesel particulate emissions associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 61 months, approximately five years, the Project would not result in a long-term (i.e., 70-year) source of TAC emissions. Moreover, a comparison of onsite construction emissions to SCAQMD-recommended local significance thresholds (LSTs) is the appropriate method for evaluating localized air quality impacts from construction, as was completed under Impact AQ-2. LSTs represent the maximum emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. To provide a more conservative analysis, LSTs used in this analysis considered a receptor distance of 656 feet (200 meters), although the nearest sensitive receptor is over 750 feet from the Project site. As indicated in Table 8, Project construction emissions would not exceed SCAQMD's recommended LSTs. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period (61 out of 840 months), existing sensitive receptors would be over 750 feet from construction activities, and the Project's construction emissions do not exceed SCAQMD-recommended LSTs, impacts associated with construction-related TAC emissions would be less than significant.

In *California Building Industry Association v Bay Area Air Quality Management District*, the California Supreme Court held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of a project (S213478, December 17, 2015). An exception to this general rule is a project that may exacerbate a condition in the existing environment. For such a situation, the lead agency is required to analyze the impact of that exacerbated condition on future residents and users of a project as well as other impacted individuals or resources. For example, a development project could exacerbate hazards relating to wildfire by providing additional fuel and ignition sources, resulting in potential impacts to future residents of the project, existing residents, or resources. Thus, the significance determination with respect to toxic air contaminants focuses on whether the Project would exacerbate environmental conditions in a manner that would increase the potential to expose people or resources to environmental impacts. Because the Project is a mixed-use residential and retail development, Project operation would not generate toxic air contaminants, nor would the Project substantially increase diesel particulates in the area because it would not attract substantial diesel traffic to the Project site, like an industrial warehouse or rest area would. Furthermore, as indicated in Impact

AQ-2, emissions of CO, PM_{10}, $PM_{2.5}$, NO_X, and ROG would not exceed SCAQMD's regional thresholds or LSTs during Project construction; therefore, the Project would not exacerbate environmental conditions in a manner that would increase the potential to expose sensitive receptors to environmental impacts.

Air Quality Dynamics prepared a HRA to assess the impact of pollutants on future individuals residing at the Project site (June 2017, Appendix C of the DEIR). The HRA analyzed the possible health effects to future site residents and guests associated with diesel particulate emissions from the adjacent I-5 freeway (see Appendix C of the DEIR). Health risks were quantified for each floor (seven and eight in total). For chronic, annual, and 24-hour exposures, concentration estimates for residential receptors are considered static whereby exposures are assumed to be continuous based upon the averaging time under consideration. For patrons residing at the proposed hotel development, occupancy including extended stay would be limited in duration whereby the 24-hour exposure estimate would apply. Short duration exposures (i.e., one- and eight-hour) apply to all common areas such as a pool and related residential/guest amenities since it is reasonable to assume that an individual could be present for periods of one to eight hours. Reduction of particulate impacts would be accomplished by reducing pollutant concentrations within the building structures. By restricting the rate of infiltration, exposures can be controlled to reduce particulate concentrations below SCAQMD's standards.

Carcinogenic Risks

To represent residential exposures, the assessment employs the USEPA's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). Specifically, activity patterns for population mobility recommended by the USEPA and presented in the *Exposure Factors Handbook* were utilized. As a result, lifetime risk values for residents were adjusted to account for an exposure duration of 350 days per year for 30 years (i.e., 95th percentile). A 9-year exposure duration was additionally assessed to identify risk estimates associated with the average time individuals are reported to reside at a given residence. These values are consistent with CEQA, which considers the evaluation of environmental effects of proposed projects in a manner that reflects both reasonable and feasible assumptions. For body weight and inhalation, the assessment employed average adult values of 70 kilograms and 20 cubic meters per day, respectively.

Table 8 and Table 9 show the maximum predicted residential carcinogenic risk estimates for Residential 1 (the seven-story building) and Residential 2 (the eight story building). As shown in the tables, floor levels two through six for Residential 1 and floor levels three through seven for Residential 2 occupancies exceed the standard of one in one hundred thousand (1.0e-5).

Table 8 Maximum Residential 1 Receptor/Carcinogenic Risk

	Exposure Scenario	
Floor Level	30 Year	9 Year
2	2.6e-05	7.9e-06
3	2.4e-05	7.3e-06
4	2.1e-05	6.2e-06
5	1.6e-05	4.8e-06
6	1.2e-05	3.5e-06
7	7.9e-06	2.5e-06

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 9 Maximum Residential 2 Receptor/Carcinogenic Risk

Floor Level	Exposure Scenario	
	30 Year	9 Year
3	2.6e-05	7.7e-06
4	2.3e-05	6.9e-06
5	1.9e-05	5.8e-06
6	1.5e-05	4.4e-06
7	1.1e-05	3.2e-06
8	7.6e-06	2.3e-06

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Non-carcinogenic Hazards

The HRA included an evaluation of the potential non-cancer effects of contaminant exposures using the hazard index approach. For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30-and 9-year exposure scenarios (see Appendix C of the DEIR). For acute exposures, the hazard indices for each respective averaging time did not equal or exceed one.

Criteria Pollutant Exposures

As discussed above, the State of California has strict ambient air quality standards for various pollutants. Pollutant emissions are considered to have a significant effect on the environment if they result in concentrations that create either a violation of an ambient air quality standard, contribute to an existing air quality violation, or expose sensitive receptors to substantive pollutant concentrations. For PM_{10} emissions, background concentrations representative of the Project area exceed the California Ambient Air Quality Standards (CAAQS) for the 24-hour and annual averaging times. As a result, a significant impact is achieved when pollutant concentrations produce a measurable change over existing background levels. Although background concentrations exceed the CAAQS annual averaging time for fine particulates, no measurable change criteria currently exists. As a result, the SCAQMD standard of 2.5 µg/m^3 for the 24-hour averaging time is used to assess PM_{10} and $PM_{2.5}$ impacts. Table 10 through Table 12 present the maximum predicted concentrations for each identified occupancy and floor level that exceed the particulate significance thresholds.

Table 10 Maximum Residential 1 Receptor/PM10 and PM2.5

Floor Level	Pollutant/Averaging Time		
	PM_{10} 24-Hour	PM_{10} Annual	$PM_{2.5}$ 24-Hour
2	11.04772	7.31759	3.58444
3	10.72527	6.84941	3.48039
4	10.21925	5.99178	3.31664
5	9.03814	4.60786	2.93522
6	7.44507	3.23152	–
7	5.82255	2.17110	–

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 11 Maximum Residential 2 Receptor/PM10 and PM2.5

	Pollutant/Averaging Time		
Floor Level	PM_{10} 24-Hour	PM_{10} Annual	$PM_{2.5}$ 24-Hour
3	13.73535	9.09714	4.43438
4	13.09213	8.12667	4.22698
5	12.05673	6.46282	3.89339
6	9.96575	4.48692	3.21970
7	7.63241	2.95801	–
8	5.73936	1.97103	–

Note: Concentrations are expressed in micrograms per cubic meter (µg/m³).

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 12 Maximum Hotel Receptor/PM10 and PM2.5

	Pollutant/Averaging Time	
Floor Level	PM_{10} 24-Hour	$PM_{2.5}$ 24-Hour
3	11.07841	3.56131
4	8.42067	2.70927
5	6.09354	–
6	4.46443	–
7	3.39506	–
8	2.67803	–

Note: Concentrations are expressed in micrograms per cubic meter ((µg/m³). Concentration estimates with receptor heights commensurate with succeeding floor levels will produce lower risk estimates.

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Background concentrations for CO (one-hour and eight-hour averaging times) and NO_2 (one-hour averaging time) are below current air quality standards. As such, significance is achieved when pollutant concentrations add to existing levels and create an exceedance of the CAAQS. The maximum modeled one-hour concentration for CO of 0.31186 parts per million (ppm) (357.13906 µg/m^3) when added to an existing background concentration of 3.0 ppm, will not cause an exceedance of the CAAQS of 20 ppm. For the 8-hour averaging time, the maximum predicted concentrations of 0.18520 ppm, (212.09453 µg/m^3) for the residential and 0.16951 ppm, (194.12644 µg/m^3) for the hotel occupancy when added to an existing background level of 3.0 ppm, does not cause an exceedance of the CAAQS of 9 ppm.

For NO_2, the maximum one-hour concentration of 0.05433 ppm (102.22127 µg/m^3) was predicted. This concentration, when added to a background concentration of 0.0795 ppm, will not cause an exceedance of the CAAQS of 0.18 ppm.

In conclusion, carcinogenic risks estimates for the 30 year exposure scenario exceed the level posing no significant risk for Residential 1 and Residential 2 receptors located on floor levels two through six and three through seven, respectively. For the nine year exposure scenario, the level posing no significant risk was not exceeded for any receptor location.

For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for all 30 year and nine year exposure scenarios. For short duration exposures, the hazard indices for the identified averaging times did not exceed unity. Therefore, non-carcinogenic hazards were predicted to be within acceptable limits.

Project Design Feature

Impacts associated with chronic, annual and/or 24-hour particulate exposures from diesel exhaust and the re-entrainment of paved roadway dust would be reduced through implementation of Air Quality PDF 3 - Air Quality Control Measures, which would limit particulate infiltration through installation of filtration systems (see the full text under Impact AQ-2). Short duration exposures associated with both toxic and criteria pollutants are below identified significance thresholds. As such, no impacts are anticipated to individuals who reside at the Project site, access common areas, utilize outdoor residential/hotel amenities, and frequent the adjoining open space area.

Table 13 through Table 15 list the discrete floor levels and associated filter requirements for the heating, ventilation and air conditioning (HVAC) control equipment. While the effectiveness of filters ranging between MERV 8 and MERV 14 are examined in Table 4.2-13 through Table 4.2-20 below, Air Quality PDF 3 – Air Quality Control Measures requires the installation of filters with MERV 15 minimum or higher efficiency for all residential uses, unless the Developer submit an air quality engineering study with a unit-by-unit analysis that demonstrates MERV 13, 14 or 15 filtration systems would be sufficient to reduce health risks to acceptable levels.

Table 13 Particulate Filter Efficiencies/Residential 1

Floor Level	MERV Rating
2	≥14
3	≥14
4	≥14
5	≥13
6	≥11
7	≥8

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 14 Particulate Filter Efficiencies/Residential 2

Floor Level	MERV Rating
3	≥14
4	≥14
5	≥14
6	≥13
7	≥11
8	≥8

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 15 Particulate Filter Efficiencies/Hotel

Floor Level	MERV Rating
3	≥10
4	≥9
5	≥8
6	≥7
7	≥6
8	≥5

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 16 through Table 20 present the carcinogenic risk and particulate concentration reductions associated with the incorporation of the identified MERV filtration efficiencies shown in Table 13 through Table 15. For carcinogenic risks, gaseous emissions are not controlled with the above referenced MERV filtration. Therefore, organic gases are considered uncontrolled and weighted against the diesel concentration estimates to produce an overall risk estimate for a given occupancy.

Table 16 Maximum Residential 1 Receptor / Carcinogenic Risk w/ MERV Filter

Floor Level	Exposure Scenario 30 Year
2	1.0e-05
3	9.3e-06
4	8.0e-06
5	9.5e-06
6	9.9e-06

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 17 Maximum Residential 2 Receptor / Carcinogenic Risk w/ MERV Filter

Floor Level	Exposure Scenario 30 Year
3	1.0e-05
4	9.2e-06
5	7.6e-06
6	8.7e-06
7	8.9e-06

Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 18 Maximum Residential 1 Receptor / PM10 and PM2.5 w/ MERV Filter

Floor Level	Pollutant/Averaging Time		
	PM_{10} 24 Hour	PM_{10} Annual	MERV Rating
2	0.55236	0.36588	0.35844
3	0.53626	0.34247	0.34804
4	0.51096	0.29959	0.33166
5	0.90381	0.46079	0.44028
6	1.11676	0.48473	–
7	1.74677	0.65133	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 19 Maximum Residential 2 Receptor / PM10 and PM2.5 w/ MERV Filter

Floor Level	Pollutant/Averaging Time		
	PM_{10} 24 Hour	PM_{10} Annual	MERV Rating
3	0.68677	0.45486	0.44344
4	0.65461	0.40633	0.42270
5	0.60284	0.32314	0.38934
6	0.99658	0.44869	0.48296
7	1.14486	0.44370	–
8	1.72181	0.59131	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Table 20 Maximum Hotel Receptor / PM10 and PM2.5 w/ MERV Filter

Floor Level	PM_{10} 24 Hour	$PM_{2.5}$ 24 Hour
3	2.21568	1.78066
4	2.10517	1.76103
5	1.82806	–
6	2.23222	–
7	2.20679	–
8	2.14242	–

Note: Concentrations are expressed in micrograms per cubic meter (μg/m³).
Source: Air Quality Dynamics, 2017; see Appendix C of the DEIR

Significance After Mitigation

Impacts would be less than significant. The implementation of the Air Quality PDF 3- Air Quality Control Measures, above, would further reduce particulate matter generated by the operation of the proposed Project.

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3 Greenhouse Gases

3.1 Background

This section analyzes greenhouse gas (GHG) emissions associated with the Project and potential impacts related to climate change.

3.1.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2014), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHG). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHG because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Both natural processes and human activities emit GHGs. CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF6 (CalEPA 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHG absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than CO_2 on a molecule per molecule basis (IPCC 2007). The United States Environmental Protection Agency (USEPA) began regulating GHG emissions under the Clean Air Act. Specifically, the Clean Air Act regulates carbon dioxide, methane, nitrous oxide, and fluorinated gases[3] USEPA 2017a). The IPCC outlines multiple methods of calculating GWPs; therefore, the USEPA presents the GWPs in a range, as outlined below (USEPA 2017a):

- Carbon dioxide (CO_2) – 1
- Methane (CH_4) – 28 – 36
- Nitrous oxide (N_2O) – 265 - 298
- Fluorinated gases –thousands or tens of thousands, depending

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

3.1.2 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHG were approximately 49,000 million metric tons (MMT, or gigatonne) of CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO_2 was the most abundant accounting for 76 percent of total 2010 emissions. CH_4 emissions accounted for 16 percent of the 2010 total, while N_2O and fluorinated gases account for approximately 6.2 and two percent, respectively (IPCC 2014).

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) CO_2e in 2015 (USEPA 2017b). Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015 (USEPA 2017b). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand (USEPA 2017b). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO_2 emissions, respectively (USEPA 2017b).

Based on the CARB California Greenhouse Gas Inventory for 2000-2015, California produced 440.4 MMT CO_2e in 2015 (CARB 2017b). The largest single source of GHG in California is transportation, contributing 39 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions, contributing 23 percent of the state's GHG emissions (CARB 2017b). California emissions are due in part to its large size and large population compared to other

[3] Chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are considered fluorinated gases.

states. However, the mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. CARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO_2e (CARB 2017c). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

3.1.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air, land, and water temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT, and surface temperatures, have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include decreased snow pack, sea level rise, and increase in extreme heat days per year, high ground-level O_3 days, large forest fires, and drought (CalEPA 2010). Below is a summary of some of the potential impacts that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in many areas of California. Climate change may increase the concentration of ground-level O_3, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC 2009).

Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (DWR 2008; CCCC 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the local and global levels. Increasing concentrations of GHGs are likely to accelerate the rate and severity of climate change impacts. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) during the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

3.1.4 Existing/Baseline Project Site Greenhouse Gas Emissions

The Project site is vacant and does not generate substantial GHG emissions. Therefore, this GHG analysis conservatively assumed the baseline emissions to be zero and focused on potential impacts from construction and operations of the proposed Project.

3.1.5 Regulatory Setting

The following regulations address both climate change and GHG emissions.

Federal Regulations

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate tail pipe emissions from motor-vehicles under the Federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons of CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons of CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons of CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons of CO_2e per year.

On July 3, 2012, the U.S. EPA issued a Final Rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

California Regulations

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the State's GHG emissions. The following section summarizes these initiatives.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires the California Air Resources Board (CARB) to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015, the governor issued EO B-30-15 calling for a new target of 40 percent below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. Implementation activities are ongoing.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017d).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March

2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the RTP. On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

SCAG was assigned targets of an eight percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, the governor signed SB 2X, requiring California to generate 33 percent of its electricity. On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires CalRecycle, in consultation with the State board, to adopt regulations that achieve specified targets for reducing organic waste in landfills. For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Regional Regulations

As discussed above, SB 375 requires MPOs to prepare a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that will achieve regional emission reductions through sustainable transportation and growth strategies. On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. Most recently, SCAG adopted the 2016-2040 RTP/SCS on April 7, 2016. The 2016-2040 RTP/SCS includes a number of strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds that included a 3,000 $MTCO_2e$/year screening threshold for residential, commercial, and mixed-use development. Under this draft, unadopted proposal, a project that exceeded that 3,000 $MTCO_2e$/year screening threshold would not be considered to have a significant GHG impact; rather, a more detailed analysis using a per capita efficiency target would be conducted. This draft screening threshold was proposed nearly 10 years ago, and no further substantial action by SCAQMD with respect to the draft threshold has occurred since.

On December 5, 2008, the SCAQMD Governing Board adopted a staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has not adopted a GHG significance threshold that would be applicable to the Project.

Local Regulations

The City of Burbank adopted the Burbank 2035 Greenhouse Gas Reduction Plan (GGRP) in 2013. Guided by the framework set forth in the City's 2035 General Plan, the GGRP implements Goal 3 and associated Policies 3.1 and 3.2. Policy 3.1 establishes the target for Burbank to reduce communitywide greenhouse gas emissions by at least 15% from current levels by 2020, and Policy 3.2 establishes the goal to reduce emissions by at least 30% from current levels by 2035. This target and goal are consistent with statewide efforts established in the Scoping Plan to reduce statewide GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050 (City of Burbank 2013).

Based on the 2010 jurisdictional emissions inventory and projections for the City provided in the GGRP, the 2020 communitywide emissions reduction target is 1,430,120 MT of CO_2e/year. Reductions from current statewide policies would contribute emissions reductions of 368,670 MT of CO_2e/year. Therefore, local actions must address an emissions gap of 61,109 MT of CO_2e/year by 2020. To achieve the 2035 communitywide emissions reduction goal of 1,177,746 MT of CO_2e/year, the City would require reductions of 949,754 MT of CO_2e/year. Reductions achieved from statewide policies would contribute 494,944 MT of CO_2e/year and local actions would be needed to achieve the remaining emissions gap of 454,810 MT of CO_2e/year by 2035.

The Burbank 2035 General Plan provides goals and policies related to greenhouse gas reductions in the Air Quality and Climate Change Element. The specific goals and policies include the following:

Goal 3: Reduction of Greenhouse Gas Emissions

Policy 3.1: Develop and adopt a binding, enforceable reduction target and mitigation measures and actions to reduce communitywide greenhouse gas emissions within Burbank by at least 15% from current levels by 2020.

Policy 3.2: Establish a goal and strategies to reduce communitywide greenhouse gas emissions by at least 30% from current levels by 2035.

Policy 3.3: Continue to participate in the Cities for Climate Protection program and applicable State and Federal climate change programs.

Policy 3.4: Reduce greenhouse gas emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio.

Policy 3.5: Submit an annual report on implementation of the Greenhouse Gas Reduction Plan, in conjunction with the annual report to the City Council regarding implementation of Burbank2035.

Policy 3.6: Reduce greenhouse gas emissions by encouraging the retrofit of older, energy inefficient buildings.

Policy 3.8: Transition all economic sectors, new development, and existing infrastructure and development to low- or zero-carbon energy sources. Encourage implementation and provide incentives for low- or zero-carbon energy sources.

Goal 4: Climate Change

Policy 4.1: Evaluate the potential effects of climate change on Burbank’s human and natural systems and prepare strategies that allow the City to appropriately respond.

Policy 4.2: Consult with state resource and emergency management agencies regarding updates to climate change science and development of adaptation priorities.

Neither the GGRP nor the City’s 2035 General Plan include, nor has the City adopted, a numerical threshold of significance for GHG emissions for individual development projects.

3.2 Impact Analysis

3.2.1 Methodology

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of GHG emission impacts. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors be considered in the determination of significance (e.g., the extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor have the SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment. Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

Calculations of CO_2, CH_4, and N_2O emissions are provided. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that the Project would emit in the largest quantities (IPCC 2007). Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, since fluorinated gases are primarily associated with industrial processes, and the proposed Project involves residential and commercial uses, the quantity of fluorinated gases would not be significant. Emissions of all GHGs are converted into their equivalent GWP in MT of CO_2e. Small amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would also be emitted; however, these other GHG emissions would not substantially add to the total GHG emissions. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CAPCOA 2008; CCAR 2009). GHG emissions associated with the proposed

Project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (see Appendix for CalEEMod worksheets).

Construction Emissions

Construction activities emit GHGs primarily through combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and in the commute vehicles of construction workers. Every phase of the construction process, including grading, paving, and building, emits GHG emissions in volumes proportional to the quantity and type of construction equipment used. Heavier equipment typically emits more GHGs per hour of use than lighter equipment because of their greater fuel consumption and engine design.

CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the Project is expected to take approximately 61 months (starting in the beginning of September 2019 and going through the end of September 2025), with full operation assumed to begin in 2026, the first full year after the end of construction. It is assumed that all construction equipment used would be diesel-powered. The construction start date may occur two to three months later than September 2019; however, using September 2019 is a conservative assumption because emissions are anticipated decrease over time and would not affect the annual GHG emissions calculations.

GHG emissions from hauling soil from the site to landfills was also included in the emissions modeling. The entire Project site would be graded and approximately 127,000 cy of cut soil would be exported from the Project site. Given an estimated haul truck capacity of 16 cy (consistent with CalEEMod standard for truck capacity), approximately 7,938 outbound haul trucks (equivalent to 15,876 total truck trips) would be required for soil export. Approximately 32,000 cy of the total soil export is conservatively assumed to be contaminated, requiring hauling to Kettleman Hills Landfill, approximately 170 miles from the Project site. The remainder of the soil export (95,000 cy) would be transported to Simi Valley Landfill, approximately 30 miles from the Project site. This was incorporated into CalEEMod using a weighted hauling trip length of 65.3 miles for all one-way hauling trips.

Complete results from CalEEMod and assumptions can be viewed in Appendix. This analysis follows the South Coast Air Quality Management District (SCAQMD) recommendation to amortize construction emissions over a period of 30 years (the assumed life of the Project) and add the amortized construction emissions to operational emissions to determine annual emissions of the Project (SCAQMD 2008).

Operational Emissions

CalEEMod calculates operational emissions of CO_2, CH_4, and N_2O associated with energy use, area sources, waste generation, water use and conveyance. CalEEMod also calculates emissions of CO_2 and CH_4 generated by Project-generated vehicle trips (i.e., mobile sources). However, CalEEMod does not calculate N_2O emissions from mobile sources; therefore, N_2O emissions were quantified separately (see Appendix).

Area Source Emissions

Area sources include GHG emissions that would occur from the use of landscaping equipment. The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. The landscaping equipment emission values were derived from the 2011 Off-Road Equipment Inventory Model.

Energy Use Emissions

As a result of the consumption of electricity and natural gas during Project operation, GHGs are emitted on-site during the combustion of natural gas for space and water heating and cooking and off-site during the generation of electricity from fossil fuels in power plants. CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the Project location and utility provider.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. The lighting energy intensity factor for residential land uses was reduced by 75 percent to account for the 2016 Title 24 requirements.

As discussed in Section 1, *Project Description*, the Project would include green building features, including a condition of approval that would go towards the City's long term goal of providing 10% of the building's modeled energy use from renewable sources including, but not limited to: payment of the Project's fair share costs in the form of rate payer fees that support the City's expansion of its renewable energy sources portfolio consistent with BWP's 2019 Integrated Resource Plan (IRP); installation roof top solar photovoltaics; installation of EV chargers; and installation of energy star appliances would all help reduce energy consumption and GHG emissions attributed to the Project (Air Quality PDF-2). The installation of roof top solar and use of energy star appliances were included in the CalEEMod analysis for the Project.

The Project would be served by Burbank Water and Power (BWP). Therefore, BWP's specific energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. BWP had renewable energy procurement of 29 percent as of 2017 (CEC 2018). Per SB 100, the statewide RPS Program requires electricity providers to increase procurement from eligible renewable energy sources to 44 percent by 2024 and 60 percent by 2030. However, the default energy intensity factors included in CalEEMod are based on data from 2009, at which time BWP had only achieved a 10 percent procurement of renewable energy (CEC 2010). To account for the continuing effects of the RPS, the energy intensity factors included in CalEEMod for the Project were reduced based on the percentage of renewables reported by BWP. Energy intensity factors that account for RPS targets established by SB 100 were utilized. Therefore, based on linear interpolation between the 2024 and 2030 targets, it was calculated that BWP would achieve a 49.33 percent procurement of renewable energy by 2026, when the Project would be fully operational. BWP energy intensity factors that include this reduction are shown in Table 21.

Table 21 Burbank Water and Power Intensity Factors

	2009 (lbs/MWh)[1]	2024 (lbs/MWh)[2]	2026 (lbs/MWh)[3]	2030 (lbs/MWh)[2]
Percent Procurement	10%	44%	49.33%	60%
Carbon dioxide (CO_2)	1,096.12	682.03	617.12	487.16
Methane (CH_4)	0.029	0.018	0.016	0.013
Nitrous oxide (N_2O)	0.006	0.004	0.003	0.003

[1] Source: CEC 2010

[2] RPS goals established by SB 100

[3] Linear interpolation of RPS goals for 2024 and 2030

Solid Waste Emissions

The disposal of solid waste produces GHG emissions from the transportation of waste, anaerobic decomposition in landfills, and incineration. To calculate the GHG emissions generated by solid waste disposal, the total volume of solid waste was calculated using waste disposal rates identified by the California Department of Resources Recycling and Recovery (CalRecycle). The methods for quantifying GHG emissions from solid waste are based on the IPCC 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 had achieved a statewide 50 percent diversion of solid waste from landfills through "reduce/recycle/compost" programs. However, AB 341 mandates that 75 percent of the solid waste generated be reduced, recycled, or composted by 2020. Therefore, to account for the continuing actions of recycling requirements under state law (i.e., AB 341), an additional 25 percent solid waste diversion rate was included in CalEEMod.

Water and Wastewater Emissions

The amount of water used and the amount of wastewater generated by a Project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O.

New development would be subject to CalGreen, which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CalGreen, a 20 percent reduction in indoor water use was included in the water consumption calculations for the proposed Project. In addition to water reductions associated with building code compliance and Project design features, the GHG emissions from the energy used to transport the water for the proposed Project scenario account for compliance with the RPS as discussed under *Energy Use Emissions*.

Mobile Source Emissions

GHG emissions from vehicles are generated by the combustion of fossil fuels in vehicle engines. Vehicle emissions are calculated based on the vehicle type and the trip rate for each land use. Trip generation rates were sourced from the Transportation Impact Analysis prepared for the proposed Project by Fehr and Peers in March 2019 (see Appendix J of the DEIR). The vehicle emission factors and fleet mix used in CalEEMod are derived from CARB's Emission Factors 2011 model, which includes GHG reductions achieved by implementation of Pavley I (Clean Car Standards) and the Low Carbon Fuel Standard and are thus considered in the calculation of standards for Project emissions.

Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified separately using guidance from CARB (CARB 2013; see Appendix for calculations). GHG emissions from passenger and light duty vehicles were derived based on the conservative assumption that the fleet mix percentage for these vehicle types equaled the percentage of total mobile source GHG emissions. This is a conservative assumption because heavy duty diesel trucks, buses, and other vehicle classes included in the fleet mix are less efficient than passenger and light duty vehicles and would be responsible for a larger percentage of total GHG emissions than the more efficient passenger and light duty vehicle classes.

Project Service Population

The Project's per person GHG emissions were calculated by dividing total GHG emissions by the Project's service population (residents, employees, and hotel guests). Section 2, Air Quality, estimated that the Project would generate 1,433 new residents and 247 new employees (see Section 2, Air Quality, for calculation details). In addition, the Project includes a 307-room hotel that would accommodate guests. According to the American Hotel & Lodging Association, 40 percent of travelers travel for business and 60 percent travel for leisure (2015). Conservatively assuming that business travelers occupy rooms individually and those traveling for leisure occupy rooms at a rate of two guests, and an 82.5 percent occupancy rate in Burbank, a 307-room hotel would typically have 405 guests on any given day (Visit Burbank 2018). Therefore, the Project's service population would be 2,085 persons (1,433 residents + 247 employees + 405 guests). This service population is provided for informational purposes and to aid in the analysis of the Project's consistency with GHG reduction plans.

3.2.2 Significance Thresholds

Based on Appendix G of the State CEQA Guidelines, impacts related to GHG emissions from the Project would be significant if the Project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (AEP 2017).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of project-related GHG emissions, including: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements of the City's GGRP, and CARB's 2017 Scoping Plan, both of which are designed to achieve the GHG reduction goals of AB 32, SB 375, and SB 32.

3.2.3 Project Impacts

Consistency Evaluation

Burbank GGRP and General Plan

As mentioned under *Local Regulations*, the City of Burbank has developed a Greenhouse Gas Reduction Plan (GGRP) in addition to the Air Quality and Climate Change Element included in the City's General Plan. A number GGRP and General Plan policies were established to reduce the citywide levels of GHG over time. These are summarized under Local Regulations above. The General Plan has a specific policy (Policy 3.4) aimed at reducing GHG emissions from new development by promoting water conservation and recycling; promoting development that is compact, mixed-use, pedestrian-friendly, and transit-oriented; promoting energy-efficient building design and site planning; and improving the jobs/housing ratio. The Project would be consistent with this policy as it is an infill development, located near existing transit, and would include water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping that uses recycled water. The Project is also consistent with applicable GGRP policies, as outlined in Table 22.

Table 22 Project Consistency with Applicable GGRP Measures

Measure	Project Consistency
Mandatory Measures	
E-1.1 Energy Efficiency in New Construction The City will require new commercial project to be constructed to Title 24 Tier 1 levels (e.g., exceed current efficiency standards by 15 percent).	**Consistent** As noted in Section 1, Project Description, the Project would meet the equivalent of LEED Gold Certified and would be constructed in a manner that would provide consistency with Title 24 Tier 1 levels. Additionally, the design and development of residential uses included in the Project would comply with CALGreen Building Standards, which include measures to reduce emissions and energy consumption. The Project would also comply with SCAQMD Rule 1113, which limits ROGs from building architectural coatings to 50 g/ L.
E-1.7 Building Shade Trees BWP will continue to administer the Made in Shade Program. The City will also revise the Zoning Ordinance to require the planning of two building shade trees per parcel to accompany each new single-family residential unit. The City will update its Street Tree Plan and Urban Forestry program, with a focus on identifying streets that currently lack street trees, parking lots that could accommodate additional shade trees, and locations for new tree plantings in City parks and open space.	**Consistent** Although the Project would not include single-family residential units, it involves the development of internal courtyards, expanded sidewalks, and a publicly accessible plaza that would include a mix of amenities such as landscaping, seating, and new shade trees. The Project also involves the creation of earth mounds and the use of sound walls to provide a sound buffer as well as the incorporation of evergreen trees where physically feasible to act as a screen and reduce the heat island effect.
E-2.1 Renewable Energy Requirements The City will require new single-family residential homes to include a 1.8 kWh solar voltaic system, and will require new multi-family and commercial construction to provide 10% of the buildings modeled energy use from renewable sources (e.g., solar PV, geothermal heat pumps). The City will require installation of solar water heaters in all new residential construction, to the fullest extent possible. The City will also require pre-wiring and pre-plumbing on new construction for residential solar PV and solar water heaters to provide for easier and less costly future installation.	**Consistent** The Project would include renewable energy via roof-top solar panels, use of the Green Building Code, pre-wiring for additional solar panels and electric vehicle charging stations, and the payment of applicable development impact and aid in construction fees to the City's public utilities. The solar panels installation would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources. Collectively, these efforts would ensure compliance with the City's long-term goals of moving toward the use of alternative fuels.
E-2.1 Transportation Management Organization Expansion The City will work with the TMO to expand the geographic reach of its programs and the extent of services it currently provides; first expanding into the Golden State and Empire areas (by 2020), and then expanding citywide at a later date. In each case, the City will require that all new businesses with 25 or more employees located within the TMP boundary become TMO members and fulfill reporting requirements.	**Consistent** This measure is aimed at the City rather than at individual developers. Nevertheless, the Project applicant would be a participant in the TMO and would implement applicable requirements (e.g., development of/participation in carpool and ridesharing programs, financial or other incentives to rideshare or use transit) and would fulfill the associated reporting requirements. Additionally, the Project would promote trip reduction through the following: ▪ Location immediately adjacent to transit options (rail and buses) and within ¼ mile of a range of goods and

Measure	Project Consistency
	services ▪ A total of 73 bicycle parking spaces for residences and the hotel (57 residential and 16 hotel) ▪ Direct sidewalk access from street to Project building ▪ Safe bicycle access from the street to bicycle parking facilities
SW-1.1 Food Scrap and Compostable Paper Diversion Ordinance The City will adopt a food scraps and compostable paper diversion ordinance, requiring all food waste and compostable paper to be diverted from the waste stream to composting facilities. As part of this ordinance, the City will update its yard waste collection program to allow customers to include food scraps and compostable paper in their yard waste bins.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet adopted the food scrap/compostable paper diversion ordinance, but the Project would be required to comply with all applicable City ordinances, including those specific to diverting food scraps and compostable paper, at such time as they are adopted.
SW-1.2: Yard Waste Diversion Ordinance The City will adopt an ordinance banning disposal of yard waste in trash bins. Multi-family residential and non-residential properties that are not currently served by the City's solid waste collection program would need to contract with a yard waste collection service provider.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet adopted the yard waste diversion ordinance, but the Project would be required to comply with all applicable City ordinances, including those specific to diverting yard waste, at such time as they are adopted.
SW-1.3: Lumber Diversion Ordinance The City will amend its existing ordinance to explicitly require the diversion of 75% of waste from construction and demolition debris generated by new construction and renovations, including scrap lumber.	**Consistent** This measure is aimed at the City rather than at individual developers. The City has not yet amended the construction & demolition debris diversion ordinance (the ordinance currently requires a 65% diversion rate), but the Project would be required to comply with all applicable City ordinances, including those specific to diverting construction/demolition debris, at such time as they are adopted.
Voluntary Measures	
E-1.3 ENERGY STAR Appliances The City will encourage voluntary community participation to install ENERGY STAR appliances or other energy-efficient appliance models in both new and existing residential units. **E-1.4: Smart Grid Integration** The City will encourage voluntary adoption of smart grid technology in new and existing construction, promoting the use of smart appliances in homes and businesses and the use of Power to track building energy use.	**Consistent** As discussed in Section 1, Project Description, the Project would meet the equivalent of LEED Gold Certified and Green Building Code standards. To that end, the Project would include ENERGY STAR or similarly rated appliances in new residential units in order to maximize all appliances' energy efficiency.
E-1.5: Cool Roofs The City will extend its current Cool Roof Pilot Program and will advertise BWP's non-residential cool roof incentives to building owners when they obtain permits for re-roofing.	**Consistent** Although this measure is aimed at the City, the Project includes cool roof features, including use of a white reflective cooling material, as noted in Section 1, Project Description.
E-2.2: Solar Voltaic Systems The City will actively promote the development of building-scale solar energy. The City will develop an outreach program to ensure BWP's Solar Photovoltaic Power program is fully subscribed between 2013 and 2016 to meet its solar goal.	**Consistent** Although this measure is aimed at the City, the Project includes rooftop solar panels that would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources.

Measure	Project Consistency
W-1.1: Water Conservation Programs The City will implement water conservation programs described in the UWMP in support of BWP's goal to reduce water consumption by 1% annually.	**Consistent** Although this measure is aimed at the City, the Project includes water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping and use of recycled water. In compliance with CalGreen, these features would reduce indoor water use by at least 20%.
W-1.2: Recycled Water Master Plan The City will complete the recycled water system expansion outlined in the Recycled Water Use Master Plan and implement recycled water requirements for large irrigation users.	**Consistent** Although this measure is aimed at the City, as required by Burbank Water and Power, the Project would include the use of recycled water during construction and for irrigation and HVAC cooling during operation.

SCAG Regional Transportation *Plan/Sustainable Communities Strategy*

The Project would not conflict with applicable goals of the 2016-2040 RTP/SCS, which focus on mobility, accessibility, a strong economy, and sustainability. Major goals of the RTP/SCS include:

1. Align the plan investments and policies with improving regional economic development and competitiveness.
2. Maximize mobility and accessibility for all people and goods in the region.
3. Ensure travel safety and reliability for all people and goods in the region.
4. Preserve and ensure a sustainable regional transportation system.
5. Maximize the productivity of our transportation system.
6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).
7. Actively encourage and create incentives for energy efficiency, where possible.
8. Encourage land use and growth patterns that facilitate transit and active transportation.
9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

Several of these goals, notably nos. 2, 6, 7, and 8, relate directly or indirectly to GHG emissions reduction and the Project.

Although Goal 2 is not specifically aimed at individual development projects, the Project would contribute to the goal of maximizing mobility and accessibility by locating mixed-use development on a site in an urban area that includes a range of transit and active transportation options (as discussed further in the following paragraph). The Project site's location immediately adjacent to transit opportunities and within ¼-mile of downtown Burbank ensure that the Project would be regionally accessible and that Project site residents, employees, and visitors would have access to a range of goods and services via walking/bicycling and transit. Further, the elevated and protected bike lanes, enhanced sidewalks, high visibility crosswalks and upgrades to the Front Street right-of-way adjacent to the Project site are all intended to provide a safe and efficient means of travel for bicyclists, pedestrians, and drivers to and from the Metrolink Station, the Project site, and Downtown Burbank.

With respect to Goals 6 and 8, the Project would involve a residential development in an urbanized area that is currently well served by public transit. The Project would be served by the Metrolink commuter rail, Los Angeles County Metropolitan Transportation Authority (Metro) bus lines, Burbank Bus lines, and Glendale Beelines. Ten individual bus lines currently serve the Project area. The Project would also be located within 0.3 miles of Chandler Boulevard that has a bike path and within 0.4 miles of Victory Boulevard, which has a bike lane. The Project would also add a bike lane on Front Street immediately adjacent to the Project Site. The Project's proximity to these bicycle facilities would encourage the use of transit and active transportation.

With respect to Goal 7, the design and implementation of the Project would comply with applicable State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard and Title 24 of the California Building Code that would reduce anticipated emissions associated with the proposed Project. The Project would be conditioned to comply with these existing requirements. For example, in accordance with the 2016 California Green Building Standards Code, the Project would include a schedule of plumbing fixtures and fixture fittings that would reduce the overall use of potable water in the building by at least 20 percent from the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. In addition, the Project would achieve LEED Gold certification or equivalency.

In order to evaluate the Project's consistency with the objectives of SB 375 and the goals of the 2016-2040 RTP/SCS, per-capita CO_2 emissions from passenger and light duty vehicles were analyzed. The 2016-2040 RTP/SCS shows regional per-capita GHG emissions from passenger and light duty vehicles being reduced by 21 percent relative to 2005 levels by 2040. The 2016-2040 RTP/SCS determined that the 2005 per-capita CO_2 emissions from passenger and light duty vehicles in the SCAG region were 23.8 pounds per day.

For the proposed Project, per-capita CO_2 emissions from passenger cars/light duty vehicles would be 14.2 lbs/day per person, a reduction of approximately 40 percent relative to the 2005 SCAG regional baseline levels examined under SB 375 (see Appendix for per capita mobile emissions calculation). This 40 percent reduction in passenger vehicle per-capita CO_2 emissions exceeds the 21 percent reduction target of the 2016-2040 RTP/SCS as well as the CARB established SB 375 targets of a 13 percent reduction by 2035.

In addition, the 2017 Scoping Plan states that "Since 2014, CARB has been working with MPOs and other stakeholders to update regional SB 375 targets. At the same time, CARB has also conducted analysis for development of the Mobile Source Strategy and Scoping Plan that identifies the need for statewide per capita greenhouse gas emissions reductions on the order of 25 percent by 2035, to meet our climate goals." The Project's 40 percent reduction in passenger vehicle per capita CO_2 emissions relative to the 2005 SCAG regional baseline levels examined under SB 375 would be consistent with this objective of reaching a 25 percent reduction in mobile source emissions from passenger cars by 2035, as identified in the 2017 Scoping Plan.

CARB 2017 Scoping Plan

CARB's 2017 Scoping Plan indicates that local actions that reduce vehicle miles traveled (VMT) are necessary to meet transportation sector-specific goals and achieve the 2030 GHG emission reduction target under SB 32. In its evaluation of the role of the transportation system in meeting the statewide emissions targets, CARB determined that VMT reductions of 7 percent below projected VMT levels in 2030 (which includes currently adopted SB 375 SCSs) are necessary. A 7 percent VMT reduction translates to a reduction, on average, of 1.5 miles/person/day from projected levels in 2030. To that end, the 2017 Scoping Plan recommends that local governments consider policies to reduce VMT to help achieve these reductions, including: land use and community design that reduces VMT; transit-oriented development; street design policies that prioritize transit, biking, and walking; and increasing low carbon mobility choices, including improved access to viable and affordable public transportation and active transportation opportunities.

As discussed above, the Project site is located in an urbanized area on a site that is immediately adjacent to a range of transit options, including low carbon rail transit. In addition, the Project site is within walking distance of downtown Burbank, which would provide a range of goods and services to site residents, employees, and visitors. Finally, the Project is a relatively high density/intensity mixed-use development that provides housing, jobs, and visitor amenities in proximity to both transit options, jobs, and services. Based on these facts, the Project is consistent with the general goal of reducing GHG emissions by reducing VMT.

The 2017 Scoping Plan also recommends that, for discretionary approvals and entitlements of individual development projects, lead agencies should prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions. For example, CARB suggests consideration of design options that reduce VMT, promote transit-oriented development, promote street design policies that prioritize transit, biking, and walking, and increase low carbon mobility choices, including improved access to viable and affordable public transportation, and active transportation opportunities. CARB notes that additional GHG reductions can be achieved through investment in local building retrofit programs that can pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures, as well as local direct investment to finance installation of regional electric vehicle (EV) charging stations and enhancement of local urban forests.

As discussed above, the proposed Project is a transit-oriented development on a site located in proximity to a range of transit options. Again, the site is also within walking distance of a range of goods and services in downtown Burbank. As discussed in Section 1, Project Description, and under *Burbank GGRP and General Plan*, the Project would be designed to be the equivalent of the United States Green Building Council (USGBC) LEED Gold Certified and would comply with Tier 1 applicable provisions of the 2016 California Green Building Standards Code (CALGreen Code). It would therefore include energy efficient lighting, appliances, windows, and insulation, as well as water conserving features and use recycled water. The Project also includes cool roofs, roof top solar panels, LED lighting, and various bicycle and pedestrian amenities. Finally, it would increase landscaping, including trees on the site, which is currently essentially devoid of vegetation. Based on these design features, the Project would implement 2017 Scoping Plan recommendations for individual development projects. An analysis of the Project's consistency with the Climate Change Scoping Plan and the 2017 Scoping Plan Update is set forth in Table 25 and Table 24, respectively.

Table 23 Project Consistency with Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Area (Less than 1 percent of Project inventory)		
SCAQMD Rule 445 (Wood Burning Devices) Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	**Consistent** The Project would not use wood burning devices or stoves.
Energy (33 percent of Project inventory)		
California Renewables Portfolio Standard (RPS) program Senate Bill 2X modified California's RPS program to require that both public and	BWP	**Consistent** BWP's commitment to achieve 33 percent renewables by 2020 would meet the requirements of the RPS program. BWP indicated in its 2019 Integrated

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. California Senate Bill 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.		Resources Plan that 32 percent of its electricity came from renewable resources in 2017. As BWP would provide electricity service to the Project Site, the Project would use electricity that is produced consistent with this performance-based standard. In addition, the solar panel installation would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources.
Senate Bill 350 (SB 350) The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030 and also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[b]	State Energy Resources Conservation and Development Commission and BWP	**Consistent** BWP would be required to meet this performance-based standard. As BWP would provide electricity service to the Project Site, the Project by 2030 would use electricity consistent with this performance-based standard. Full Project operation would occur in 2026 and, therefore, the estimated GHG emissions from electricity usage provided below conservatively do not include implementation of SB 350 with a compliance date of 2030[a]. Electricity GHG emissions presented in Table 28 below would be further reduced by 2030 as the electricity provided to the Project Site would meet the requirements under SB 350. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under the CCR, Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems and insulation. The Project would further support this action/strategy by achieving LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions.
Senate Bill 1368 (SB 1368) GHG Emissions Standard for Baseload Generation prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.	State, CEC, and BWP	**Consistent** BWP meets the requirements of SB 1368. As BWP would provide electricity service to the Project Site, the Project would use electricity that meets the requirements under SB 1368.
California Code of Regulations (CCR), Title 20 The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	**Consistent** The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Project would result in new land use development that would be outfitted with appliances and lighting that comply with CEC's standards. In addition, the Project would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
CCR, Title 24, Building Standards Code The 2016 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.[c] The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.	State and CEC	**Consistent** Consistent with regulatory requirements, the Project would comply with applicable provisions of the 2016 Building Energy Efficiency Standards. The 2016 Title 24 standards are 28 percent more efficient (for electricity) than residential construction built to the 2013 Title 24 standards and 5 percent more efficient (for electricity) for non-residential construction built to 2013 Title 24 standards. The 2016 Title 24 standards are more efficient than the 2020 Projected Emissions under Business-as-Usual in CARB's 2008 Climate Action Scoping Plan. The standards promote the use of better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. The Project would further support this regulation since the Project would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions. Thus, the Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the 2008 Climate Action Scoping Plan to reduce GHG emissions.
Energy Independence and Security Act of 2007 (EISA) EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.	Federal/ Manufacturers	**Consistent** EISA would serve to reduce the use of incandescent light bulbs for the Project and, thus, reduce energy usage associated with lighting.
Assembly Bill 1109 (AB 1109) The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing for sale in the state specified general purpose lights that contain levels of hazardous substances, as it requires the establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.[d]	State/ Manufacturers	**Consistent** As with the EISA, discussed above, the Project would meet the requirements under AB 1109 because it incorporates energy efficient lighting and electricity consumption and complies with local and state green building programs.
Cap-and-Trade Program The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.	State	**Consistent** As required by AB 32 and the 2008 Climate Change Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the development

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		facilitated by the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's annual electricity usage would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.
Million Solar Roofs Program The program is implemented through SB 1 (Murray, 2006), which provides up to $3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.	State	**Consistent** The Project would achieve LEED Gold certification or equivalence. In addition, the Project would include solar panels that would go towards the City's long-term goal of providing 10% of a new building's modeled energy use from renewable sources. In addition, the Project would be eligible for the incentives offered by the Million Solar Roofs program.
Mobile (59 percent of Project inventory)		
Assembly Bill 1493 (AB 1493) "Pavley Standards" AB 1493 requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. In compliance with AB 1493, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles and light - duty trucks of model year 2009 through 2016. Model years 2017 through 2025 are addressed by California's Advanced Clean Cars program (discussed below).	State, CARB	**Consistent** The Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and reduced GHG emissions by about 30 percent in 2016, all while improving fuel efficiency. This regulatory program applies to vehicle manufacturers, and not directly to land use development. Vehicular travel by the Project would benefit from this regulation in the form of reduced GHG emissions because vehicle trips associated with the Project would be affected by AB 1493. Mobile source emissions generated by the Project would be reduced with implementation of AB 1493 consistent with reduction of GHG emissions under AB 32.
Executive Order S-01-07 The Low Carbon Fuel Standard (LCFS) requires a 10 percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009).[e,f]	State, CARB	**Not applicable** This regulatory program applies to fuel suppliers, and not directly to land use development. GHG emissions related to vehicular travel by the Project would benefit from this regulation because fuel used by Project-related vehicles would be compliant with LCFS.
Advanced Clean Cars Program In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.	State, CARB	**Not applicable** Similar to AB 1493, this regulatory program applies to manufacturers, and not directly to land use development. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project. GHG emissions related to vehicular travel by the Project would benefit from this regulation and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program consistent with reduction of GHG emissions under AB 32. The Project would

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		further support this regulation since the Applicant would provide parking spaces pre-wired for electric vehicles.
Senate Bill (SB) 375 SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.	State, CARB Regional, SCAG	**Consistent** SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would ***concentrate new*** residential and commercial retail and restaurant uses within a high quality transit area (HQTA). Therefore, the Project would be consistent with SCAG's 2016 RTP/SCS as it is located within a HQTA. Furthermore, the 2016 RTP/SCS would result in an estimated 18 percent decrease in per capita passenger vehicle GHG emissions by 2035 and a 21 percent decrease in per capita passenger vehicle GHG emissions by 2040, within the SCAG region. CARB updated the SB 375 targets for the SCAG region, requiring a 19 percent decrease in VMT by 2035. Implementation of the 2016 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals.
Solid Waste (3 percent of Project inventory)		
California Integrated Waste Management Act of 1989 and Assembly Bill 341 The California Integrated Waste Management Act of 1989 requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.[g] ***AB 341 (2011)*** amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[h]	State	**Consistent** GHG emissions related to solid waste generation from the Project would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would then in return decrease the amount of methane released from the decomposing solid waste. As part of their lease or sales agreement, all Project tenants and owners (both residential and commercial) would be required to recycle all qualifying items in accordance with the Burbank Recycling Center's guidelines to help ensure that the Project would meet the 75 percent diversion required by AB 341. In addition, the Project would comply with the City's Diversion of Construction and Demolition Debris Ordinance, which requires the diversion and recycling of at least 65 percent of the Project's construction and demolition debris.
Water (4 percent of Project inventory)		
CCR, Title 24, Building Standards Code The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20 percent overall water use reduction.	State	**Consistent** The Project would comply with applicable provisions of the California Green Building Standards Code that require a 20 percent overall water use reduction.
Senate Bill X7-7 The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban	State	**Consistent** As discussed above under Title 24, the Project would incorporate water conservation features that would

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.		contribute towards meeting this performance-based standard. In addition, the Project includes water efficient appliances and fixtures, drip irrigation, and drought tolerant landscaping and use of recycled water. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Construction (2 percent of Project inventory)		
CARB In-Use Off-Road Regulation CARB's in-use off-road diesel vehicle regulation ("Off-Road Diesel Fleet Regulation") requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.	CARB	**Consistent** The Applicant would use construction contractors that would comply with this regulation.
CARB In-Use On-Road Regulation CARB's in-use on-road heavy-duty vehicle regulation ("Truck and Bus Regulation") applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.[i]	CARB	**Consistent** The Applicant would use construction contractors that would comply with this regulation.

[a] *Operational GHG emissions would be anticipated to decrease in subsequent years as the vehicle fleet mix is anticipated to become less polluting in future years due to more stringent emissions control regulations.*

[b] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, Ch. 547.*

[c] *CEC, Adoption Hearing, 2016 Building Energy Efficiency Standards.*

[d] *2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.*

[e] *CARB, Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources, October 23, 2009.*

[f] *Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.*

[g] *Cal. Pub. Res. Code § 41780(a).*

[h] *Cal. Pub. Res. Code § 41780.01(a).*

[i] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, page last reviewed December 14, 2017.*

Table 24 Project Consistency with Climate Change 2017 Scoping Plan Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Senate Bill 350 (SB 350) The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to	CPUC, CEC, CARB	**Consistent** BWP is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As BWP would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
50 percent by 2030.[a] Required measures include: ▪ Increase RPS to 50 percent of retail sales by 2030. ▪ Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. ▪ Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this action/strategy because it would achieve LEED Gold certification or equivalence, thereby reducing overall energy usage compared to baseline conditions.
Implement Mobile Source Strategy (Cleaner Technology and Fuels) ▪ At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025. ▪ At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030. ▪ Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations. ▪ Medium- and heavy-duty GHG Phase 2. ▪ Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard. ▪ Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and	CARB, CalSTA, SGC, Caltrans CEC, OPR, Local agencies	**Consistent** CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program likely will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project, depending on the outcome of ongoing negotiations between CARB and EPA regarding federal standards. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030. In addition, the Project would support this policy since the Applicant would prewire parking spaces for electrical vehicles. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.[b,c] GHG emissions generated by Project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
remaining flat through 2030. ▪ Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		of GHG emissions under AB 32. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Project would also benefit from these measures once adopted. SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would concentrate new residential and hotel uses within a HQTA. Therefore, the Project would be consistent with SCAG's 2016 RTP/SCS, as it is located within a HQTA. Furthermore, the 2016 RTP/SCS would result in an estimated 18 percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21 percent decrease in per capita GHG emissions from passenger vehicles by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19 percent decrease in VMT by 2035. Implementation of the 2016 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. Therefore, the Project would be consistent with SB 375, the 2016 RTP/SCS, and with CARB's updated 2035 target.
Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets)	CARB	**Consistent** Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035. The Project would be consistent with SB 375 for developing an infill project within an existing urbanized area. This would ***concentrate new*** residential and hotel uses within a HQTA. Therefore, the Project would be consistent with SB 375 and the 2016 RTP/SCS, and with CARB's updated 2035 target.
By 2019, adjust performance measures used to select and design transportation facilities ▪ Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**Not Applicable** The Project would not involve construction of transportation facilities. However, the Project Site is located immediately adjacent to the Metrolink station. The Project benefits from this proximity as it will encourage use of mass transit, resulting in a reduction of Project-related vehicle trips to and from the Project Site.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts)	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**Consistent** The Project would support this policy since the Applicant would provide prewiring for electric vehicle chargers in parking spaces.

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Implement California Sustainable Freight Action Plan ▪ Improve freight system efficiency. ▪ Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	CARB	**Not Applicable** The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent	CARB	**Consistent** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with LCFS.
Implement the Short-Lived Climate Pollutant Strategy by 2030: ▪ 40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. ▪ 50 percent reduction in black carbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent** Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.[e] The Project would comply with the CARB SLCP Reduction Strategy, which limits the use of hydrofluorocarbons for refrigeration uses.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent** Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50 percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75 percent reduction by 2025. The Project would be consistent with AB 341, which requires not less than 75 percent of solid waste generated be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps	CARB	**Consistent** The current Cap-and-Trade program would end on December 31, 2020. Assembly Bill 398 (AB 398) was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions. Under the Cap-and-Trade program, entities such as power generation companies and natural gas processing plants would be required to limit or reduce GHG emissions. This would result in a

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		reduction of GHG emissions associated with the Project's energy usage. As the Project would not impede the Program's progress, the Project is considered consistent.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink: ▪ Protect land from conversion through conservation easements and other incentives. ▪ Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity ▪ Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments ▪ Establish scenario projections to serve as the foundation for the Implementation Plan	CNRA and departments within, CDFA, CalEPA, CARB	**Not Applicable** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**Not Applicable** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Implement Forest Carbon Plan	CNRA, CAL FIRE, CalEPA and departments within	**Not Applicable** This regulatory program applies to state and federal forest land, not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors	State Agencies & Local Agencies	**Not Applicable** Funding and financing mechanisms are the responsibility of the state and local agencies. The Project would not conflict with funding and financing mechanisms to support GHG reductions.

[a] *Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[b] *CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm.*

[c] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), www.arb.ca.gov/msprog/actruck/actruck.htm.*

[d] *CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm.*

[e] *CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm.*

Source: California Air Resources Board (CARB), California's 2017 Climate Change Scoping Plan, November 2017.

In order to evaluate the Project's consistency with the GGRP and 2017 Scoping Plan, this analysis includes an evaluation of Project emissions against a 2030 Project-specific efficiency criteria that is derived from the GHG inventory contained in the GGRP. This metric is not a significance threshold but is included for informational purposes to help determine the Project's consistency with the GGRP and 2017 Scoping Plan. Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant.

As part of its GGRP, the City completed a 2010 baseline GHG inventory that calculated communitywide emissions of 1,992,162 MT of CO_2e per year, including landing and takeoff emissions associated with the Burbank Airport. To calculate a 2030 locally-applicable, project-specific criteria to determine the Project's consistency with the non-transportation related objectives of the 2017 Scoping Plan and goals of SB 32, the 2010 inventory was used to determine the magnitude of GHG reductions that would be necessary to achieve the GHG reduction targets set by the State for all non-transportation emission sources. The Project's consistency with the 2017 Scoping Plan's Mobile Source Strategy and RTP/SCS is discussed above. Excluding transportation sources, the adjusted 2010 baseline GHG inventory for Burbank totals 786,073 MT of CO_2e per year.

AB 32 set a statewide target of reducing GHG emissions to 1990 levels by 2020. Therefore, for the City of Burbank to be consistent with AB 32, baseline annual GHG emissions levels for non-transportation sources would need to be reduced by 15 percent to 1990 levels (approximately 668,162 MT of CO_2e per year) by 2020. In addition, SB 32 set a statewide GHG emission reduction target of 40 percent below 1990 levels by 2030. Therefore, annual GHG emissions levels would need to be reduced by 40 percent below 1990 levels by 2030 to approximately 471,644 MT of CO_2e per year for non-transportation emissions to be consistent with SB 32.

Accordingly, the 2030 project-specific efficiency criteria can be calculated by dividing total citywide GHG emissions by the citywide service population for year 2030. Based on SCAG data, the City's service population was 210,100 persons in 2012 and will be 263,700 persons in 2040. Therefore, using linear interpolation between 2012 and 2040, the City's 2030 service population would be approximately 244,557 persons. Therefore, the 2030 locally-appropriate, project-specific criteria for non-transportation sources would be approximately 1.93 MT of CO_2e per person per year (see Table 25).

Table 25 Locally-Applicable Project-Specific Metric for Non-Transportation Sources

Target Year	Value
1990 Baseline Levels[1]	786,073 MT of CO_2e/year
2020 Target (AB 32)[2]	668,162 MT of CO_2e/year
2030 Target (SB 32)[3]	471,644 MT of CO_2e/year
2030 Service Population	244,557 persons
2030 Project-Specific Efficiency Metric	1.93 MT of CO_2e per service person per year

[1] Source: City of Burbank GGRP

[2] AB 32 sets a target of reducing GHG emissions to 1990 levels by 2020 (or 15% percent below baseline levels).

[3] SB 32 sets a target of reducing GHG emissions by 40 percent below 1990 levels by 2030.

Based on CalEEMod results, construction activity for the Project would generate an estimated 13,182 MT CO_2e, as shown in Table 25. Amortized over a 30-year period, construction of the proposed Project would generate 439 MT CO_2e per year.

Table 26 combines the annual construction and operational GHG emissions associated with development of the proposed Project (excluding transportation-related emissions).

Table 26 Estimated Construction Emissions of Greenhouse Gases

Construction Year	Annual Emissions ($MT\ CO_2e$)
2019	615
2020	2,966
2021	1,967
2022	1,919
2023	2,083
2024	2,062
2025	1,570
Total	**13,182**
Amortized over 30 years	439

See Appendix for CalEEMod results.

Table 27 Combined Non-Transportation Annual Emissions MT CO2e/year

Emission Source	Project Emissions ($MT\ CO_2e$)
Construction	439
Operational	
Area	10
Energy	2,171
Solid Waste	173
Water	122
Total	**2,915**
Service Population	2,085
Non-Transportation Emissions Per Service Person	**1.40 MT of CO_2e per service person per year**
2030 Project-Specific Non-Transportation Efficiency Criteria	*1.93 MT of CO_2e per service person per year*
Exceed Criteria?	**No**

Source: See Appendix for CalEEMod results. Values have been rounded.

As demonstrated in Table 27, Project emissions from all non-transportation sources would total 2,915 MT of CO_2e per year or 1.40 MT of CO_2e per service person per year. Project emissions would not exceed the 2030 locally-appropriate, project-specific criteria for non-transportation sources of 1.93 MT of CO_2e per person per year (see Table 25).

Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[4] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require the State board to ensure that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency, and reducing water usage.

The emissions modeling in the 2017 Scoping Plan Update has projected 2030 statewide emissions that take into account known commitments (reduction measures) such as SB 375, SB 350 and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Scoping Plan Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Scoping Plan Update, additional measures to achieve the 2030 targets and beyond are outside of the City's or the Project's control. Therefore, any evaluation of post-2030 Project emission would be speculative.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." [5] In the 2017 Scoping Plan Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of

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4 Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.

5 CARB, Climate Change Scoping Plan: A Framework for Change, December 2008.,p. 117.

efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately." [6]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's GHG emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table 28 below, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project will be consistent with post-2020 GHG reduction goals. The 2016 RTP/SCS would result in an estimated 8 percent decrease in per capita passenger vehicle GHG emissions by 2020, an 18 percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21 percent decrease in per capita passenger vehicle GHG emissions by 2040. In March 2018, CARB adopted updated targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

The Project is the type of land use development that is encouraged by the 2016 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. As set forth above, the Project's per-capita CO_2 emissions from passenger cars/light duty vehicles would be 14.2 lbs/day per person, a reduction of approximately 40 percent relative to the 2005 SCAG regional baseline levels examined under SB 375. This 40 percent reduction in passenger vehicle per-capita CO_2 emissions exceeds the 21 percent reduction target of the 2016-2040 RTP/SCS as well as the CARB established SB 375 targets of a 13 percent reduction by 2035. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2020 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

Conclusion

Based on the above facts, the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the objectives and emission targets of the City's GGRP and General Plan, SCAG's SCS, and the 2017 Scoping Plan, as well as other applicable plans and policies. Therefore, impacts would be less than significant and mitigation is not required.

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[6] CARB, 2017 Scoping Plan Update, November 2017, p. 18

Project Emissions

As discussed above, Section 15064.4 of the CEQA guidelines recommends quantification of a Project's GHG emissions. However, the quantification is being done for informational purposes only and Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant. In support of the above regulatory consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the City's GGRP and General Plan, SCAG's SCS, and the 2017 Scoping Plan, quantitative calculations are provided below.

Table 28 includes a summary of total Project GHG emissions including amortized construction emissions, and operational emissions. As discussed above, construction emissions associated with construction activity (13,182 MT of CO_2e) are amortized over 30 years. As shown therein, the proposed Project would generate 9,086 MT CO_2e per year.

Table 28 Estimated Total Emissions of Greenhouse Gases

Emission Source	Project Emissions (MT CO_2e)
Construction	439
Operational	
Area	10
Energy	2,171
Solid Waste	173
Water	122
Mobile	
CO_2 and CH_4	6,104
N_2O	67
Total	9,086

Mitigation Measures

The Project would be consistent with the City's GGRP and other applicable plans and policies aimed at GHG emissions reduction; therefore, no mitigation measures are required.

4 References

Air Quality

Air Quality Dynamics. 2017. 777 North Front Street Project Health Risk Assessment (HRA). June 2017. [Document].

Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. Available online at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

Burbank, City of. 2013. Department of Community Development. Burbank2035 General Plan. Available online at: https://www.burbankca.gov/home/showdocument?id=23448.

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available online at: https://www.arb.ca.gov/ch/handbook.pdf.

California Air Resources Board (CARB). 2016. Ambient Air Quality Standards. Available online at: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.153920632.1342973680.1553199709-244280180.1516298831.

California Air Resources Board (CARB). 2018. Top 4 Summary at Los Angeles-North Main Street Monitoring Station. Available online at: https://www.arb.ca.gov/adam/topfour/topfourdisplay.php.

California Department of Finance (California DOF). 2018. E-5 Population and Housing Estimates for Cities, Counties, and the State 2011-2018. Available online at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

California Emissions Estimator Model (CalEEMod). Version 2016.3.2. [Computer software].

Fehr & Peers. July 2012. *Burbank Travel Demand Forecasting: Model Development Report*. Available online at: http://www.burbankca.gov/home/showdocument?id=34737

Fehr & Peers (F&P). 2019. *Transportation Impact Analysis for the 777 North Front Street Project*. March 2019. [Document].

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

South Coast Air Quality Management District (SCAQMD). 2003. Final Localized Significance Threshold Methodology. June 2003. Available online at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2.

South Coast Air Quality Management District (SCAQMD). 2009. Appendix C – Mass Rate LST Look-up Tables. Available online at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

South Coast Air Quality Management District (SCAQMD). 2017. Final 2016 Air Quality Management Plan. Available online at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-

aqmp/final2016aqmp.pdf?sfvrsn=15.

Southern California Association of Governments (SCAG). 2001. Employment Density Study Summary Report. [Document].

Southern California Association of Governments (SCAG). 2016. 2016 RTP/SCS. Available online at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx

Southern California Association of Governments (SCAG). 2017. Profile of the City of Burbank. Available online at: https://www.scag.ca.gov/Documents/Burbank.pdf.

Greenhouse Gas Emissions

American Hotel & Lodging Association. 2015. Lodging Industry Trends 2015. https://www.ahla.com/sites/default/files/Lodging_Industry_Trends_2015.pdf.

Association of Environmental Professionals (AEP). 2017. California Environmental Quality Act (CEQA) Statute and Guidelines.

Burbank, City of. 2013. Greenhouse Gas Reduction Plan *Burbank2035 General Plan.* Available online at: http://www.burbankca.gov/home/showdocument?id=23440.

California Air Pollution Control Officers Association. 2008. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA).

California Air Resources Board (CARB). 2013. Mobile Source Emission Inventory – EMFAC2011 Frequently Asked Questions. January. Available at: https://www.arb.ca.gov/msei/emfac2011-faq.htm

California Air Resources Board (CARB). 2017a. California Greenhous Gas Emission Inventory – 2017 edition. Available online at: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed July 2018.

California Air Resources Board (CARB). 2017b. 2020 BAU Emissions Projection. Available online at: https://www.arb.ca.gov/cc/inventory/data/tables/2020_bau_forecast_by_scoping_category_2014-05-22.pdf. Accessed July 208.

California Air Resources Board (CARB). 2017c. AB 32 Scoping Plan Website. http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed July 2018.

California Air Resources Board (CARB). 2019. EMFAC 2014 Web Database. Available at: https://www.arb.ca.gov/emfac/2014/

California Climate Action Registry (CCAR). 2009. General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

California Climate Change Center (CCCC). 2006. Climate Scenarios for California. July 2006.

California Climate Change Center (CCCC). 2009. The Impacts of Sea-Level Rise on the California Coast. Available online at: http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF.

California Department of Water Resources (DWR). 2008. Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water. Available online at: https://www.water.ca.gov/LegacyFiles/pubs/planning/managing_an_uncertain_future__climate_change_adaptation_strategies_for_california's_water/managing_an_uncertain_future.pdf

California Energy Commission. 2009. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature. March 2009.

_____. 2010. 2009 Power Content Label – Burbank Water and Power. https://www.energy.ca.gov/pcl/labels/2009_labels/Burbank%202009%20PCL.pdf.

_____. 2018. 2017 Power Content Label – Burbank Water and Power. https://www.energy.ca.gov/pcl/labels/2017_labels/Burbank_2017_PCL.pdf

California Environmental Protection Agency, March 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Available online at: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDFappen.

_____.2010. Climate Action Team Biennial Report. Final Report. April 2010.

Intergovernmental Panel on Climate Change (IPCC). 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

_____. 2014. Summary for Policymakers. In: Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Parmesan, C. August 2006. Ecological and Evolutionary Responses to Recent Climate Change.

South Coast Air Quality Management District (SCAQMD). 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. October 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf (accessed May 2019).

United Nations Intergovernmental Panel, 2014. Climate Change 2014 Synthesis Report Summary for Policymakers. Available online at: https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

United States Environmental Protection Agency (USEPA) February 14, 2017a. Understanding Global Warming Potentials. Available online at: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

United States Environmental Protection Agency (USEPA) 2017b. Criteria Air Pollutants. Available online at: https://www.epa.gov/criteria-air-pollutants.

Visit Burbank. 2018. Accomplishments FY 2017-2018 Looking Ahead 2018-2019. Available online at: https://www.visitburbank.com/wp-content/uploads/2018/10/2017-18vb_annual_report_vf6_lowres.pdf

Appendix

CalEEMod Output and Calculations

La Terra Mixed Use Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
High Turnover (Sit Down Restaurant)	1.80	1000sqft	0.00	1,800.00	0
Hotel	307.00	Room	0.00	212,350.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	573.00	Dwelling Unit	7.45	645,806.00	1639
Strip Mall	1.07	1000sqft	0.00	1,070.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2026
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	617.12	**CH4 Intensity (lb/MWhr)**	0.016	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised to be consistent with SB 100 RPS targets

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Trips and VMT - Weighted hauling trip length assuming 25.2% of trucks travel 170 mi distance with HAZ soil and 74.8% traveling 30 mi to Simi Valley

Grading - Exporting 127,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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tblConstructionPhase	NumDays	20.00	65.00
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblEnergyUse	LightingElect	7.87	1.97
tblEnergyUse	LightingElect	2.14	0.54
tblEnergyUse	LightingElect	6.26	1.57
tblFireplaces	FireplaceDayYear	25.00	0.00

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	487.05	0.00
tblFireplaces	NumberNoFireplace	57.30	0.00
tblFireplaces	NumberWood	28.65	0.00
tblGrading	AcresOfGrading	43.50	8.09
tblGrading	AcresOfGrading	0.00	8.09
tblGrading	MaterialExported	0.00	127,000.00
tblLandUse	LandUseSquareFeet	445,764.00	212,350.00
tblLandUse	LandUseSquareFeet	573,000.00	645,806.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	10.23	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	15.08	7.45
tblLandUse	LotAcreage	0.02	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.016
tblProjectCharacteristics	CO2IntensityFactor	1096.12	617.12
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	263.58	197.69
tblSolidWaste	SolidWasteGenerationRate	0.03	0.02
tblSolidWaste	SolidWasteGenerationRate	21.42	16.07
tblSolidWaste	SolidWasteGenerationRate	168.08	126.06
tblSolidWaste	SolidWasteGenerationRate	4.56	3.42
tblSolidWaste	SolidWasteGenerationRate	1.12	0.84
tblTripsAndVMT	HaulingTripLength	20.00	65.30

tblTripsAndVMT	HaulingTripNumber	15,875.00	15,876.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	127.15	91.99
tblVehicleTrips	WD_TR	8.17	7.44
tblVehicleTrips	WD_TR	33.82	0.00
tblVehicleTrips	WD_TR	44.32	30.96
tblWater	IndoorWaterUseRate	37,333,256.68	2,986,605.00
tblWater	IndoorWaterUseRate	546,360.68	437,088.50
tblWater	IndoorWaterUseRate	7,787,598.39	6,230,079.00
tblWater	IndoorWaterUseRate	79,257.60	63,406.08
tblWoodstoves	NumberCatalytic	28.65	0.00
tblWoodstoves	NumberNoncatalytic	28.65	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2262	3.4248	1.3024	6.3900e-003	1.0401	0.1002	1.1404	0.4557	0.0925	0.5481	0.0000	613.6524	613.6524	0.0729	0.0000	615.4751
2020	0.8640	9.6911	7.0283	0.0313	1.5971	0.1860	1.7831	0.4825	0.1744	0.6568	0.0000	2,960.2467	2,960.2467	0.2224	0.0000	2,965.8068
2021	0.7682	5.2427	6.7197	0.0214	1.2817	0.1396	1.4213	0.3443	0.1312	0.4755	0.0000	1,963.8380	1,963.8380	0.1428	0.0000	1,967.4071
2022	0.7077	4.8230	6.3272	0.0209	1.2768	0.1187	1.3955	0.3430	0.1116	0.4545	0.0000	1,915.4826	1,915.4826	0.1375	0.0000	1,918.9197
2023	1.8747	4.2508	6.8440	0.0227	1.4990	0.1127	1.6117	0.4020	0.1064	0.5084	0.0000	2,079.5559	2,079.5559	0.1366	0.0000	2,082.9718
2024	1.8485	4.1125	6.5980	0.0225	1.5105	0.1008	1.6113	0.4051	0.0951	0.5002	0.0000	2,058.1801	2,058.1801	0.1342	0.0000	2,061.5358
2025	1.3797	3.2072	5.1830	0.0171	1.1296	0.0792	1.2088	0.3029	0.0744	0.3773	0.0000	1,567.1599	1,567.1599	0.1186	0.0000	1,570.1244
Maximum	**1.8747**	**9.6911**	**7.0283**	**0.0313**	**1.5971**	**0.1860**	**1.7831**	**0.4825**	**0.1744**	**0.6568**	**0.0000**	**2,960.2467**	**2,960.2467**	**0.2224**	**0.0000**	**2,965.8068**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0952	2.4147	1.3612	6.3900e-003	0.6721	0.0462	0.7183	0.2570	0.0459	0.3029	0.0000	613.6522	613.6522	0.0729	0.0000	615.4749
2020	0.6663	8.8273	7.2247	0.0313	1.4832	0.1481	1.6313	0.4225	0.1464	0.5688	0.0000	2,960.2464	2,960.2464	0.2224	0.0000	2,965.8064
2021	0.6080	4.8243	6.8892	0.0214	1.2817	0.1325	1.4141	0.3443	0.1315	0.4758	0.0000	1,963.8376	1,963.8376	0.1428	0.0000	1,967.4067
2022	0.5735	4.6424	6.5235	0.0209	1.2768	0.1310	1.4078	0.3430	0.1301	0.4730	0.0000	1,915.4822	1,915.4822	0.1375	0.0000	1,918.9193
2023	1.7407	4.2371	7.0587	0.0227	1.4990	0.1424	1.6414	0.4020	0.1414	0.5434	0.0000	2,079.5555	2,079.5555	0.1366	0.0000	2,082.9714
2024	1.7281	4.2331	6.8245	0.0225	1.5105	0.1433	1.6538	0.4051	0.1424	0.5474	0.0000	2,058.1797	2,058.1797	0.1342	0.0000	2,061.5354
2025	1.2897	3.4873	5.4480	0.0171	1.1296	0.1263	1.2559	0.3029	0.1256	0.4285	0.0000	1,567.1595	1,567.1595	0.1186	0.0000	1,570.1240
Maximum	**1.7407**	**8.8273**	**7.2247**	**0.0313**	**1.5105**	**0.1481**	**1.6538**	**0.4225**	**0.1464**	**0.5688**	**0.0000**	**2,960.2464**	**2,960.2464**	**0.2224**	**0.0000**	**2,965.8064**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**12.62**	**6.00**	**-3.32**	**0.00**	**5.16**	**-3.88**	**4.42**	**9.46**	**-9.91**	**5.14**	**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	**9-2-2019**	**12-1-2019**	1.5917	0.6409
2	**12-2-2019**	**3-1-2020**	5.6207	5.1675
3	**3-2-2020**	**6-1-2020**	2.9130	2.6292
4	**6-2-2020**	**9-1-2020**	1.6385	1.4280

5	**9-2-2020**	**12-1-2020**	1.6361	1.4279
6	**12-2-2020**	**3-1-2021**	1.5276	1.3639
7	**3-2-2021**	**6-1-2021**	1.4981	1.3524
8	**6-2-2021**	**9-1-2021**	1.4915	1.3459
9	**9-2-2021**	**12-1-2021**	1.4888	1.3447
10	**12-2-2021**	**3-1-2022**	1.4036	1.3042
11	**3-2-2022**	**6-1-2022**	1.3840	1.3045
12	**6-2-2022**	**9-1-2022**	1.3780	1.2985
13	**9-2-2022**	**12-1-2022**	1.3755	1.2967
14	**12-2-2022**	**3-1-2023**	1.4636	1.4133
15	**3-2-2023**	**6-1-2023**	1.5384	1.5011
16	**6-2-2023**	**9-1-2023**	1.5318	1.4945
17	**9-2-2023**	**12-1-2023**	1.5288	1.4919
18	**12-2-2023**	**3-1-2024**	1.4999	1.4877
19	**3-2-2024**	**6-1-2024**	1.4858	1.4859
20	**6-2-2024**	**9-1-2024**	1.4795	1.4796
21	**9-2-2024**	**12-1-2024**	1.4764	1.4765
22	**12-2-2024**	**3-1-2025**	1.4306	1.4555
23	**3-2-2025**	**6-1-2025**	1.4318	1.4700
24	**6-2-2025**	**9-1-2025**	1.6453	1.7374
25	**9-2-2025**	**9-30-2025**	0.5352	0.5683
		Highest	5.6207	5.1675

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	3.6432	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332
Energy	0.0636	0.5599	0.3502	3.4700e-003		0.0440	0.0440		0.0440	0.0440	0.0000	2,351.0679	2,351.0679	0.0567	0.0199	2,358.4193
Mobile	1.2389	5.9777	15.9087	0.0658	6.0362	0.0497	6.0859	1.6175	0.0462	1.6637	0.0000	6,097.1222	6,097.1222	0.2800	0.0000	6,104.1213
Waste						0.0000	0.0000		0.0000	0.0000	69.8492	0.0000	69.8492	4.1280	0.0000	173.0484
Water						0.0000	0.0000		0.0000	0.0000	3.0978	112.9381	116.0359	0.3211	8.0600e-003	126.4660
Total	**4.9457**	**6.6058**	**22.1863**	**0.0696**	**6.0362**	**0.1265**	**6.1627**	**1.6175**	**0.1230**	**1.7405**	**72.9470**	**8,570.8272**	**8,643.7743**	**4.7951**	**0.0280**	**8,771.9882**

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	3.6432	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332
Energy	0.0636	0.5599	0.3502	3.4700e-003		0.0440	0.0440		0.0440	0.0440	0.0000	2,163.6048	2,163.6048	0.0518	0.0190	2,170.5630
Mobile	1.2389	5.9777	15.9087	0.0658	6.0362	0.0497	6.0859	1.6175	0.0462	1.6637	0.0000	6,097.1222	6,097.1222	0.2800	0.0000	6,104.1213
Waste						0.0000	0.0000		0.0000	0.0000	69.8492	0.0000	69.8492	4.1280	0.0000	173.0484
Water						0.0000	0.0000		0.0000	0.0000	3.0978	108.2199	111.3177	0.3210	8.0400e-003	121.7379
Total	**4.9457**	**6.6058**	**22.1863**	**0.0696**	**6.0362**	**0.1265**	**6.1627**	**1.6175**	**0.1230**	**1.7405**	**72.9470**	**8,378.6459**	**8,451.5929**	**4.7901**	**0.0270**	**8,579.4038**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.24**	**2.22**	**0.10**	**3.32**	**2.20**

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	9/2/2019	11/29/2019	5	65	
2	Grading	Grading	12/2/2019	3/31/2020	5	87	
3	Building Construction	Building Construction	4/1/2020	9/30/2025	5	1435	
4	Architectural Coating	Architectural Coating	1/2/2023	9/30/2025	5	717	
5	Paving	Paving	6/30/2025	9/26/2025	5	65	

Acres of Grading (Site Preparation Phase): 8.09

Acres of Grading (Grading Phase): 8.09

Acres of Paving: 0.64

Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	15,876.00	14.70	6.90	65.30	LD_Mix	HDT_Mix	HHDT
Building Construction	9	779.00	204.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	156.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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					0.5914	0.0000	0.5914	0.3232	0.0000	0.3232	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1409	1.4811	0.7171	1.2300e-003		0.0777	0.0777		0.0715	0.0715	0.0000	111.0482	111.0482	0.0351	0.0000	111.9266
Total	**0.1409**	**1.4811**	**0.7171**	**1.2300e-003**	**0.5914**	**0.0777**	**0.6691**	**0.3232**	**0.0715**	**0.3947**	**0.0000**	**111.0482**	**111.0482**	**0.0351**	**0.0000**	**111.9266**

3.2 Site Preparation - 2019

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	2.9300e-003	2.4400e-003	0.0266	7.0000e-005	6.4100e-003	6.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.1621	6.1621	2.1000e-004	0.0000	6.1674
Total	**2.9300e-003**	**2.4400e-003**	**0.0266**	**7.0000e-005**	**6.4100e-003**	**6.0000e-005**	**6.4700e-003**	**1.7000e-003**	**5.0000e-005**	**1.7500e-003**	**0.0000**	**6.1621**	**6.1621**	**2.1000e-004**	**0.0000**	**6.1674**

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					0.2662	0.0000	0.2662	0.1454	0.0000	0.1454	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0303	0.6196	0.7462	1.2300e-003		0.0308	0.0308		0.0308	0.0308	0.0000	111.0481	111.0481	0.0351	0.0000	111.9265
Total	**0.0303**	**0.6196**	**0.7462**	**1.2300e-003**	**0.2662**	**0.0308**	**0.2969**	**0.1454**	**0.0308**	**0.1762**	**0.0000**	**111.0481**	**111.0481**	**0.0351**	**0.0000**	**111.9265**

3.2 Site Preparation - 2019

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	2.9300e-003	2.4400e-003	0.0266	7.0000e-005	6.4100e-003	6.0000e-005	6.4700e-003	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	6.1621	6.1621	2.1000e-004	0.0000	6.1674
Total	**2.9300e-003**	**2.4400e-003**	**0.0266**	**7.0000e-005**	**6.4100e-003**	**6.0000e-005**	**6.4700e-003**	**1.7000e-003**	**5.0000e-005**	**1.7500e-003**	**0.0000**	**6.1621**	**6.1621**	**2.1000e-004**	**0.0000**	**6.1674**

3.3 Grading - 2019

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					0.0777	0.0000	0.0777	0.0380	0.0000	0.0380	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0284	0.3118	0.1792	3.3000e-004		0.0154	0.0154		0.0141	0.0141	0.0000	29.3065	29.3065	9.2700e-003	0.0000	29.5383
Total	**0.0284**	**0.3118**	**0.1792**	**3.3000e-004**	**0.0777**	**0.0154**	**0.0931**	**0.0380**	**0.0141**	**0.0521**	**0.0000**	**29.3065**	**29.3065**	**9.2700e-003**	**0.0000**	**29.5383**

3.3 Grading - 2019

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	0.0532	1.6288	0.3721	4.7400e-003	0.3628	7.0900e-003	0.3699	0.0923	6.7900e-003	0.0991	0.0000	465.3975	465.3975	0.0282	0.0000	466.1032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.9000e-004	7.4900e-003	2.0000e-005	1.8100e-003	2.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7380	1.7380	6.0000e-005	0.0000	1.7395
Total	**0.0540**	**1.6294**	**0.3796**	**4.7600e-003**	**0.3646**	**7.1100e-003**	**0.3717**	**0.0928**	**6.8000e-003**	**0.0996**	**0.0000**	**467.1355**	**467.1355**	**0.0283**	**0.0000**	**467.8428**

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					0.0350	0.0000	0.0350	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9900e-003	0.1632	0.2089	3.3000e-004		8.3100e-003	8.3100e-003		8.3100e-003	8.3100e-003	0.0000	29.3065	29.3065	9.2700e-003	0.0000	29.5383
Total	**7.9900e-003**	**0.1632**	**0.2089**	**3.3000e-004**	**0.0350**	**8.3100e-003**	**0.0433**	**0.0171**	**8.3100e-003**	**0.0254**	**0.0000**	**29.3065**	**29.3065**	**9.2700e-003**	**0.0000**	**29.5383**

3.3 Grading - 2019

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	0.0532	1.6288	0.3721	4.7400e-003	0.3628	7.0900e-003	0.3699	0.0923	6.7900e-003	0.0991	0.0000	465.3975	465.3975	0.0282	0.0000	466.1032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	6.9000e-004	7.4900e-003	2.0000e-005	1.8100e-003	2.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7380	1.7380	6.0000e-005	0.0000	1.7395
Total	**0.0540**	**1.6294**	**0.3796**	**4.7600e-003**	**0.3646**	**7.1100e-003**	**0.3717**	**0.0928**	**6.8000e-003**	**0.0996**	**0.0000**	**467.1355**	**467.1355**	**0.0283**	**0.0000**	**467.8428**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2072	0.0000	0.2072	0.1091	0.0000	0.1091	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0789	0.8575	0.5217	9.6000e-004		0.0414	0.0414		0.0381	0.0381	0.0000	84.6909	84.6909	0.0274	0.0000	85.3757
Total	**0.0789**	**0.8575**	**0.5217**	**9.6000e-004**	**0.2072**	**0.0414**	**0.2486**	**0.1091**	**0.0381**	**0.1472**	**0.0000**	**84.6909**	**84.6909**	**0.0274**	**0.0000**	**85.3757**

3.3 Grading - 2020

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	0.1469	4.4788	1.0790	0.0138	0.4172	0.0172	0.4344	0.1121	0.0165	0.1286	0.0000	1,359.555 7	1,359.555 7	0.0828	0.0000	1,361.625 2
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	2.2500e-003	1.8100e-003	0.0201	6.0000e-005	5.3400e-003	5.0000e-005	5.3900e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	4.9791	4.9791	1.6000e-004	0.0000	4.9830
Total	**0.1492**	**4.4806**	**1.0990**	**0.0139**	**0.4225**	**0.0173**	**0.4398**	**0.1135**	**0.0165**	**0.1300**	**0.0000**	**1,364.534 8**	**1,364.534 8**	**0.0829**	**0.0000**	**1,366.608 2**

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					0.0932	0.0000	0.0932	0.0491	0.0000	0.0491	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.4823	0.6172	9.6000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	84.6908	84.6908	0.0274	0.0000	85.3756
Total	**0.0236**	**0.4823**	**0.6172**	**9.6000e-004**	**0.0932**	**0.0246**	**0.1178**	**0.0491**	**0.0246**	**0.0737**	**0.0000**	**84.6908**	**84.6908**	**0.0274**	**0.0000**	**85.3756**

3.3 Grading - 2020

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	0.1469	4.4788	1.0790	0.0138	0.4172	0.0172	0.4344	0.1121	0.0165	0.1286	0.0000	1,359.555 7	1,359.555 7	0.0828	0.0000	1,361.625 2
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	2.2500e-003	1.8100e-003	0.0201	6.0000e-005	5.3400e-003	5.0000e-005	5.3900e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	4.9791	4.9791	1.6000e-004	0.0000	4.9830
Total	**0.1492**	**4.4806**	**1.0990**	**0.0139**	**0.4225**	**0.0173**	**0.4398**	**0.1135**	**0.0165**	**0.1300**	**0.0000**	**1,364.534 8**	**1,364.534 8**	**0.0829**	**0.0000**	**1,366.608 2**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2088	1.8898	1.6596	2.6500e-003		0.1100	0.1100		0.1035	0.1035	0.0000	228.1358	228.1358	0.0557	0.0000	229.5273
Total	**0.2088**	**1.8898**	**1.6596**	**2.6500e-003**		**0.1100**	**0.1100**		**0.1035**	**0.1035**	**0.0000**	**228.1358**	**228.1358**	**0.0557**	**0.0000**	**229.5273**

3.4 Building Construction - 2020

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	0.0729	2.1775	0.5894	5.1500e-003	0.1266	0.0101	0.1367	0.0365	9.6900e-003	0.0462	0.0000	499.1876	499.1876	0.0317	0.0000	499.9806
Worker	0.3542	0.2856	3.1585	8.6700e-003	0.8408	7.1700e-003	0.8480	0.2233	6.6100e-003	0.2299	0.0000	783.6976	783.6976	0.0247	0.0000	784.3150
Total	**0.4271**	**2.4631**	**3.7480**	**0.0138**	**0.9674**	**0.0173**	**0.9847**	**0.2599**	**0.0163**	**0.2762**	**0.0000**	**1,282.8852**	**1,282.8852**	**0.0564**	**0.0000**	**1,284.2956**

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	0.0664	1.4013	1.7606	2.6500e-003		0.0890	0.0890		0.0890	0.0890	0.0000	228.1356	228.1356	0.0557	0.0000	229.5270
Total	**0.0664**	**1.4013**	**1.7606**	**2.6500e-003**		**0.0890**	**0.0890**		**0.0890**	**0.0890**	**0.0000**	**228.1356**	**228.1356**	**0.0557**	**0.0000**	**229.5270**

3.4 Building Construction - 2020

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	0.0729	2.1775	0.5894	5.1500e-003	0.1266	0.0101	0.1367	0.0365	9.6900e-003	0.0462	0.0000	499.1876	499.1876	0.0317	0.0000	499.9806
Worker	0.3542	0.2856	3.1585	8.6700e-003	0.8408	7.1700e-003	0.8480	0.2233	6.6100e-003	0.2299	0.0000	783.6976	783.6976	0.0247	0.0000	784.3150
Total	**0.4271**	**2.4631**	**3.7480**	**0.0138**	**0.9674**	**0.0173**	**0.9847**	**0.2599**	**0.0163**	**0.2762**	**0.0000**	**1,282.8852**	**1,282.8852**	**0.0564**	**0.0000**	**1,284.2956**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0827	2.6273	0.7123	6.7700e-003	0.1677	5.3600e-003	0.1731	0.0484	5.1200e-003	0.0535	0.0000	656.2232	656.2232	0.0403	0.0000	657.2295
Worker	0.4374	0.3405	3.8443	0.0111	1.1140	9.1800e-003	1.1232	0.2959	8.4600e-003	0.3043	0.0000	1,005.328 1	1,005.328 1	0.0296	0.0000	1,006.067 7
Total	**0.5201**	**2.9678**	**4.5567**	**0.0179**	**1.2817**	**0.0145**	**1.2962**	**0.3443**	**0.0136**	**0.3579**	**0.0000**	**1,661.551 3**	**1,661.551 3**	**0.0698**	**0.0000**	**1,663.297 2**

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	0.0879	1.8565	2.3325	3.5100e-003		0.1179	0.1179		0.1179	0.1179	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.0879**	**1.8565**	**2.3325**	**3.5100e-003**		**0.1179**	**0.1179**		**0.1179**	**0.1179**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0827	2.6273	0.7123	6.7700e-003	0.1677	5.3600e-003	0.1731	0.0484	5.1200e-003	0.0535	0.0000	656.2232	656.2232	0.0403	0.0000	657.2295
Worker	0.4374	0.3405	3.8443	0.0111	1.1140	9.1800e-003	1.1232	0.2959	8.4600e-003	0.3043	0.0000	1,005.3281	1,005.3281	0.0296	0.0000	1,006.0677
Total	**0.5201**	**2.9678**	**4.5567**	**0.0179**	**1.2817**	**0.0145**	**1.2962**	**0.3443**	**0.0136**	**0.3579**	**0.0000**	**1,661.5513**	**1,661.5513**	**0.0698**	**0.0000**	**1,663.2972**

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	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

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	0.0773	2.4866	0.6714	6.6800e-003	0.1671	4.6700e-003	0.1717	0.0482	4.4600e-003	0.0527	0.0000	647.9672	647.9672	0.0387	0.0000	648.9348
Worker	0.4086	0.3064	3.5286	0.0107	1.1097	8.8600e-003	1.1186	0.2947	8.1600e-003	0.3029	0.0000	966.2726	966.2726	0.0266	0.0000	966.9378
Total	**0.4859**	**2.7930**	**4.2000**	**0.0174**	**1.2768**	**0.0135**	**1.2903**	**0.3430**	**0.0126**	**0.3556**	**0.0000**	**1,614.2398**	**1,614.2398**	**0.0653**	**0.0000**	**1,615.8726**

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	0.0876	1.8494	2.3236	3.5000e-003		0.1175	0.1175		0.1175	0.1175	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.0876**	**1.8494**	**2.3236**	**3.5000e-003**		**0.1175**	**0.1175**		**0.1175**	**0.1175**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

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	0.0773	2.4866	0.6714	6.6800e-003	0.1671	4.6700e-003	0.1717	0.0482	4.4600e-003	0.0527	0.0000	647.9672	647.9672	0.0387	0.0000	648.9348
Worker	0.4086	0.3064	3.5286	0.0107	1.1097	8.8600e-003	1.1186	0.2947	8.1600e-003	0.3029	0.0000	966.2726	966.2726	0.0266	0.0000	966.9378
Total	**0.4859**	**2.7930**	**4.2000**	**0.0174**	**1.2768**	**0.0135**	**1.2903**	**0.3430**	**0.0126**	**0.3556**	**0.0000**	**1,614.2398**	**1,614.2398**	**0.0653**	**0.0000**	**1,615.8726**

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

3.4 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	0.0574	1.8787	0.6024	6.4600e-003	0.1671	2.1900e-003	0.1693	0.0482	2.1000e-003	0.0503	0.0000	627.6818	627.6818	0.0342	0.0000	628.5369
Worker	0.3842	0.2772	3.2447	0.0103	1.1097	8.6100e-003	1.1183	0.2947	7.9300e-003	0.3027	0.0000	930.9138	930.9138	0.0240	0.0000	931.5130
Total	**0.4416**	**2.1558**	**3.8471**	**0.0168**	**1.2768**	**0.0108**	**1.2876**	**0.3430**	**0.0100**	**0.3530**	**0.0000**	**1,558.5957**	**1,558.5957**	**0.0582**	**0.0000**	**1,560.0498**

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	0.0876	1.8494	2.3236	3.5000e-003		0.1175	0.1175		0.1175	0.1175	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0876**	**1.8494**	**2.3236**	**3.5000e-003**		**0.1175**	**0.1175**		**0.1175**	**0.1175**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

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	0.0574	1.8787	0.6024	6.4600e-003	0.1671	2.1900e-003	0.1693	0.0482	2.1000e-003	0.0503	0.0000	627.6818	627.6818	0.0342	0.0000	628.5369
Worker	0.3842	0.2772	3.2447	0.0103	1.1097	8.6100e-003	1.1183	0.2947	7.9300e-003	0.3027	0.0000	930.9138	930.9138	0.0240	0.0000	931.5130
Total	**0.4416**	**2.1558**	**3.8471**	**0.0168**	**1.2768**	**0.0108**	**1.2876**	**0.3430**	**0.0100**	**0.3530**	**0.0000**	**1,558.5957**	**1,558.5957**	**0.0582**	**0.0000**	**1,560.0498**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0564	1.8860	0.5884	6.4800e-003	0.1684	2.1800e-003	0.1705	0.0486	2.0800e-003	0.0507	0.0000	629.9903	629.9903	0.0340	0.0000	630.8392
Worker	0.3667	0.2547	3.0449	0.0101	1.1183	8.5500e-003	1.1268	0.2970	7.8700e-003	0.3049	0.0000	908.9888	908.9888	0.0221	0.0000	909.5421
Total	**0.4231**	**2.1407**	**3.6333**	**0.0165**	**1.2866**	**0.0107**	**1.2973**	**0.3456**	**9.9500e-003**	**0.3556**	**0.0000**	**1,538.9791**	**1,538.9791**	**0.0561**	**0.0000**	**1,540.3813**

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	0.0883	1.8636	2.3415	3.5300e-003		0.1184	0.1184		0.1184	0.1184	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0883**	**1.8636**	**2.3415**	**3.5300e-003**		**0.1184**	**0.1184**		**0.1184**	**0.1184**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0564	1.8860	0.5884	6.4800e-003	0.1684	2.1800e-003	0.1705	0.0486	2.0800e-003	0.0507	0.0000	629.9903	629.9903	0.0340	0.0000	630.8392
Worker	0.3667	0.2547	3.0449	0.0101	1.1183	8.5500e-003	1.1268	0.2970	7.8700e-003	0.3049	0.0000	908.9888	908.9888	0.0221	0.0000	909.5421
Total	**0.4231**	**2.1407**	**3.6333**	**0.0165**	**1.2866**	**0.0107**	**1.2973**	**0.3456**	**9.9500e-003**	**0.3556**	**0.0000**	**1,538.9791**	**1,538.9791**	**0.0561**	**0.0000**	**1,540.3813**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1333	1.2158	1.5683	2.6300e-003		0.0514	0.0514		0.0484	0.0484	0.0000	226.1215	226.1215	0.0532	0.0000	227.4503
Total	**0.1333**	**1.2158**	**1.5683**	**2.6300e-003**		**0.0514**	**0.0514**		**0.0484**	**0.0484**	**0.0000**	**226.1215**	**226.1215**	**0.0532**	**0.0000**	**227.4503**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0409	1.3916	0.4266	4.7900e-003	0.1253	1.5900e-003	0.1269	0.0362	1.5200e-003	0.0377	0.0000	466.3310	466.3310	0.0249	0.0000	466.9537
Worker	0.2595	0.1734	2.1032	7.1900e-003	0.8323	6.2300e-003	0.8385	0.2211	5.7400e-003	0.2268	0.0000	650.3412	650.3412	0.0150	0.0000	650.7166
Total	**0.3004**	**1.5650**	**2.5298**	**0.0120**	**0.9576**	**7.8200e-003**	**0.9654**	**0.2572**	**7.2600e-003**	**0.2645**	**0.0000**	**1,116.6722**	**1,116.6722**	**0.0399**	**0.0000**	**1,117.6702**

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	0.0657	1.3870	1.7427	2.6300e-003		0.0881	0.0881		0.0881	0.0881	0.0000	226.1212	226.1212	0.0532	0.0000	227.4501
Total	**0.0657**	**1.3870**	**1.7427**	**2.6300e-003**		**0.0881**	**0.0881**		**0.0881**	**0.0881**	**0.0000**	**226.1212**	**226.1212**	**0.0532**	**0.0000**	**227.4501**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0409	1.3916	0.4266	4.7900e-003	0.1253	1.5900e-003	0.1269	0.0362	1.5200e-003	0.0377	0.0000	466.3310	466.3310	0.0249	0.0000	466.9537
Worker	0.2595	0.1734	2.1032	7.1900e-003	0.8323	6.2300e-003	0.8385	0.2211	5.7400e-003	0.2268	0.0000	650.3412	650.3412	0.0150	0.0000	650.7166
Total	**0.3004**	**1.5650**	**2.5298**	**0.0120**	**0.9576**	**7.8200e-003**	**0.9654**	**0.2572**	**7.2600e-003**	**0.2645**	**0.0000**	**1,116.6722**	**1,116.6722**	**0.0399**	**0.0000**	**1,117.6702**

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	1.1268					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.1694	0.2355	3.9000e-004		9.2100e-003	9.2100e-003		9.2100e-003	9.2100e-003	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.1517**	**0.1694**	**0.2355**	**3.9000e-004**		**9.2100e-003**	**9.2100e-003**		**9.2100e-003**	**9.2100e-003**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

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	0.0769	0.0555	0.6498	2.0600e-003	0.2222	1.7200e-003	0.2240	0.0590	1.5900e-003	0.0606	0.0000	186.4218	186.4218	4.8000e-003	0.0000	186.5418
Total	**0.0769**	**0.0555**	**0.6498**	**2.0600e-003**	**0.2222**	**1.7200e-003**	**0.2240**	**0.0590**	**1.5900e-003**	**0.0606**	**0.0000**	**186.4218**	**186.4218**	**4.8000e-003**	**0.0000**	**186.5418**

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	1.1268					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7300e-003	0.1764	0.2382	3.9000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	33.1923	33.1923	1.9900e-003	0.0000	33.2419
Total	**1.1345**	**0.1764**	**0.2382**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**33.1923**	**33.1923**	**1.9900e-003**	**0.0000**	**33.2419**

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	0.0769	0.0555	0.6498	2.0600e-003	0.2222	1.7200e-003	0.2240	0.0590	1.5900e-003	0.0606	0.0000	186.4218	186.4218	4.8000e-003	0.0000	186.5418
Total	**0.0769**	**0.0555**	**0.6498**	**2.0600e-003**	**0.2222**	**1.7200e-003**	**0.2240**	**0.0590**	**1.5900e-003**	**0.0606**	**0.0000**	**186.4218**	**186.4218**	**4.8000e-003**	**0.0000**	**186.5418**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0237	0.1597	0.2371	3.9000e-004		7.9800e-003	7.9800e-003		7.9800e-003	7.9800e-003	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.1592**	**0.1597**	**0.2371**	**3.9000e-004**		**7.9800e-003**	**7.9800e-003**		**7.9800e-003**	**7.9800e-003**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

3.5 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0734	0.0510	0.6098	2.0100e-003	0.2239	1.7100e-003	0.2257	0.0595	1.5800e-003	0.0611	0.0000	182.0311	182.0311	4.4300e-003	0.0000	182.1419
Total	**0.0734**	**0.0510**	**0.6098**	**2.0100e-003**	**0.2239**	**1.7100e-003**	**0.2257**	**0.0595**	**1.5800e-003**	**0.0611**	**0.0000**	**182.0311**	**182.0311**	**4.4300e-003**	**0.0000**	**182.1419**

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	1.1355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7900e-003	0.1778	0.2401	3.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.1433**	**0.1778**	**0.2401**	**3.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

3.5 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0734	0.0510	0.6098	2.0100e-003	0.2239	1.7100e-003	0.2257	0.0595	1.5800e-003	0.0611	0.0000	182.0311	182.0311	4.4300e-003	0.0000	182.1419
Total	**0.0734**	**0.0510**	**0.6098**	**2.0100e-003**	**0.2239**	**1.7100e-003**	**0.2257**	**0.0595**	**1.5800e-003**	**0.0611**	**0.0000**	**182.0311**	**182.0311**	**4.4300e-003**	**0.0000**	**182.1419**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0167	0.1117	0.1764	2.9000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003	0.0000	24.8942	24.8942	1.3600e-003	0.0000	24.9282
Total	**0.8618**	**0.1117**	**0.1764**	**2.9000e-004**		**5.0200e-003**	**5.0200e-003**		**5.0200e-003**	**5.0200e-003**	**0.0000**	**24.8942**	**24.8942**	**1.3600e-003**	**0.0000**	**24.9282**

3.5 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0520	0.0347	0.4212	1.4400e-003	0.1667	1.2500e-003	0.1679	0.0443	1.1500e-003	0.0454	0.0000	130.2352	130.2352	3.0100e-003	0.0000	130.3104
Total	**0.0520**	**0.0347**	**0.4212**	**1.4400e-003**	**0.1667**	**1.2500e-003**	**0.1679**	**0.0443**	**1.1500e-003**	**0.0454**	**0.0000**	**130.2352**	**130.2352**	**3.0100e-003**	**0.0000**	**130.3104**

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	0.8451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7900e-003	0.1323	0.1787	2.9000e-004		9.2700e-003	9.2700e-003		9.2700e-003	9.2700e-003	0.0000	24.8942	24.8942	1.3600e-003	0.0000	24.9281
Total	**0.8509**	**0.1323**	**0.1787**	**2.9000e-004**		**9.2700e-003**	**9.2700e-003**		**9.2700e-003**	**9.2700e-003**	**0.0000**	**24.8942**	**24.8942**	**1.3600e-003**	**0.0000**	**24.9281**

3.5 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0520	0.0347	0.4212	1.4400e-003	0.1667	1.2500e-003	0.1679	0.0443	1.1500e-003	0.0454	0.0000	130.2352	130.2352	3.0100e-003	0.0000	130.3104
Total	**0.0520**	**0.0347**	**0.4212**	**1.4400e-003**	**0.1667**	**1.2500e-003**	**0.1679**	**0.0443**	**1.1500e-003**	**0.0454**	**0.0000**	**130.2352**	**130.2352**	**3.0100e-003**	**0.0000**	**130.3104**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0297	0.2789	0.4738	7.4000e-004		0.0136	0.0136		0.0125	0.0125	0.0000	65.0626	65.0626	0.0210	0.0000	65.5886
Paving	8.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0306**	**0.2789**	**0.4738**	**7.4000e-004**		**0.0136**	**0.0136**		**0.0125**	**0.0125**	**0.0000**	**65.0626**	**65.0626**	**0.0210**	**0.0000**	**65.5886**

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.1100e-003	0.0135	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	4.1742	4.1742	1.0000e-004	0.0000	4.1766
Total	**1.6700e-003**	**1.1100e-003**	**0.0135**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**4.0000e-005**	**1.4600e-003**	**0.0000**	**4.1742**	**4.1742**	**1.0000e-004**	**0.0000**	**4.1766**

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	0.0182	0.3671	0.5621	7.4000e-004		0.0198	0.0198		0.0198	0.0198	0.0000	65.0625	65.0625	0.0210	0.0000	65.5886
Paving	8.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0191**	**0.3671**	**0.5621**	**7.4000e-004**		**0.0198**	**0.0198**		**0.0198**	**0.0198**	**0.0000**	**65.0625**	**65.0625**	**0.0210**	**0.0000**	**65.5886**

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.1100e-003	0.0135	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	4.0000e-005	1.4600e-003	0.0000	4.1742	4.1742	1.0000e-004	0.0000	4.1766
Total	**1.6700e-003**	**1.1100e-003**	**0.0135**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**4.0000e-005**	**1.4600e-003**	**0.0000**	**4.1742**	**4.1742**	**1.0000e-004**	**0.0000**	**4.1766**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2389	5.9777	15.9087	0.0658	6.0362	0.0497	6.0859	1.6175	0.0462	1.6637	0.0000	6,097.122 2	6,097.122 2	0.2800	0.0000	6,104.121 3
Unmitigated	1.2389	5.9777	15.9087	0.0658	6.0362	0.0497	6.0859	1.6175	0.0462	1.6637	0.0000	6,097.122 2	6,097.122 2	0.2800	0.0000	6,104.121 3

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,779.05	3,661.47	3357.78	10,209,718	10,209,718
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	165.58	285.07	237.31	262,888	262,888
Hotel	2,284.08	2,514.33	1826.65	5,372,764	5,372,764
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Strip Mall	33.13	44.98	21.86	63,188	63,188
Total	5,261.84	6,505.85	5,443.60	15,908,557	15,908,557

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
City Park	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Enclosed Parking with Elevator	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
High Turnover (Sit Down Restaurant)	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Hotel	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Other Asphalt Surfaces	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Recreational Swimming Pool	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Strip Mall	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,533.923 9	1,533.923 9	0.0398	7.4600e-003	1,537.140 3
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,721.387 1	1,721.387 1	0.0446	8.3700e-003	1,724.996 6
NaturalGas Mitigated	0.0636	0.5599	0.3502	3.4700e-003		0.0440	0.0440		0.0440	0.0440	0.0000	629.6808	629.6808	0.0121	0.0115	633.4227
NaturalGas Unmitigated	0.0636	0.5599	0.3502	3.4700e-003		0.0440	0.0440		0.0440	0.0440	0.0000	629.6808	629.6808	0.0121	0.0115	633.4227

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.2905e+006	0.0339	0.2899	0.1233	1.8500e-003		0.0234	0.0234		0.0234	0.0234	0.0000	335.6849	335.6849	6.4300e-003	6.1500e-003	337.6797
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	415368	2.2400e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	22.1656	22.1656	4.2000e-004	4.1000e-004	22.2973
Hotel	5.09215e+006	0.0275	0.2496	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	271.7367	271.7367	5.2100e-003	4.9800e-003	273.3515
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
Recreational Swimming Pool	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
Strip Mall	1754.8	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0936	0.0936	0.0000	0.0000	0.0942
Total		**0.0636**	**0.5599**	**0.3502**	**3.4700e-003**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**629.6808**	**629.6808**	**0.0121**	**0.0115**	**633.4227**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.2905e+006	0.0339	0.2899	0.1233	1.8500e-003		0.0234	0.0234		0.0234	0.0234	0.0000	335.6849	335.6849	6.4300e-003	6.1500e-003	337.6797
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	415368	2.2400e-003	0.0204	0.0171	1.2000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	22.1656	22.1656	4.2000e-004	4.1000e-004	22.2973
Hotel	5.09215e+006	0.0275	0.2496	0.2097	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	271.7367	271.7367	5.2100e-003	4.9800e-003	273.3515
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
Recreational Swimming Pool	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
Strip Mall	1754.8	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0936	0.0936	0.0000	0.0000	0.0942
Total		**0.0636**	**0.5599**	**0.3502**	**3.4700e-003**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**629.6808**	**629.6808**	**0.0121**	**0.0115**	**633.4227**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	2.0041e+006	560.9884	0.0145	2.7300e-003	562.1648
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	2.79734e+006	783.0340	0.0203	3.8100e-003	784.6759
High Turnover (Sit Down Restaurant)	68832	19.2675	5.0000e-004	9.0000e-005	19.3079
Hotel	1.26985e+006	355.4584	9.2200e-003	1.7300e-003	356.2038
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	9426.7	2.6387	7.0000e-005	1.0000e-005	2.6443
Total		**1,721.3871**	**0.0446**	**8.3700e-003**	**1,724.9966**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.74894e +006	489.5651	0.0127	2.3800e-003	490.5917
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	2.51761e +006	704.7306	0.0183	3.4300e-003	706.2083
High Turnover (Sit Down Restaurant)	61948.8	17.3408	4.5000e-004	8.0000e-005	17.3771
Hotel	1.14287e +006	319.9126	8.2900e-003	1.5600e-003	320.5834
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	8484.03	2.3749	6.0000e-005	1.0000e-005	2.3798
Total		**1,533.9240**	**0.0398**	**7.4600e-003**	**1,537.1403**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.6432	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332
Unmitigated	3.6432	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332

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	0.3107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1795	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332
Total	**3.6432**	**0.0682**	**5.9274**	**3.1000e-004**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**9.6991**	**9.6991**	**9.3600e-003**	**0.0000**	**9.9332**

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	0.3107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1795	0.0682	5.9274	3.1000e-004		0.0328	0.0328		0.0328	0.0328	0.0000	9.6991	9.6991	9.3600e-003	0.0000	9.9332
Total	**3.6432**	**0.0682**	**5.9274**	**3.1000e-004**		**0.0328**	**0.0328**		**0.0328**	**0.0328**	**0.0000**	**9.6991**	**9.6991**	**9.3600e-003**	**0.0000**	**9.9332**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	111.3177	0.3210	8.0400e-003	121.7379
Unmitigated	116.0359	0.3211	8.0600e-003	126.4660

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.98661 / 23.5362	85.0289	0.0995	2.7100e-003	88.3230
City Park	0 / 0.357444	1.1116	3.0000e-005	1.0000e-005	1.1140
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.437088 / 0.0348741	1.8403	0.0143	3.4000e-004	2.3001
Hotel	6.23008 / 0.865289	27.3752	0.2037	4.9200e-003	33.9321
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0473145 / 0.0289992	0.2777	1.5500e-003	4.0000e-005	0.3276
Strip Mall	0.0634061 / 0.0485772	0.4023	2.0800e-003	5.0000e-005	0.4693
Total		**116.0359**	**0.3211**	**8.0700e-003**	**126.4660**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.98661 / 22.1005	80.5640	0.0994	2.6800e-003	83.8487
City Park	0 / 0.33564	1.0438	3.0000e-005	1.0000e-005	1.0460
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.437088 / 0.0327468	1.8336	0.0143	3.4000e-004	2.2935
Hotel	6.23008 / 0.812506	27.2111	0.2037	4.9200e-003	33.7676
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0473145 / 0.0272303	0.2722	1.5500e-003	4.0000e-005	0.3221
Strip Mall	0.0634061 / 0.045614	0.3931	2.0800e-003	5.0000e-005	0.4601
Total		**111.3177**	**0.3210**	**8.0400e-003**	**121.7379**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	69.8492	4.1280	0.0000	173.0484
Unmitigated	69.8492	4.1280	0.0000	173.0484

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	197.69	40.1293	2.3716	0.0000	99.4186
City Park	0.02	4.0600e-003	2.4000e-004	0.0000	0.0101
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	16.07	3.2621	0.1928	0.0000	8.0816
Hotel	126.06	25.5890	1.5123	0.0000	63.3958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Strip Mall	0.84	0.1705	0.0101	0.0000	0.4224
Total		**69.8492**	**4.1280**	**0.0000**	**173.0484**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	197.69	40.1293	2.3716	0.0000	99.4186
City Park	0.02	4.0600e-003	2.4000e-004	0.0000	0.0101
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	16.07	3.2621	0.1928	0.0000	8.0816
Hotel	126.06	25.5890	1.5123	0.0000	63.3958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	3.42	0.6942	0.0410	0.0000	1.7199
Strip Mall	0.84	0.1705	0.0101	0.0000	0.4224
Total		**69.8492**	**4.1280**	**0.0000**	**173.0484**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Terra Mixed Use Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
High Turnover (Sit Down Restaurant)	1.80	1000sqft	0.00	1,800.00	0
Hotel	307.00	Room	0.00	212,350.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	573.00	Dwelling Unit	7.45	645,806.00	1639
Strip Mall	1.07	1000sqft	0.00	1,070.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 33

Climate Zone 12 **Operational Year** 2026

Utility Company Burbank Water & Power

CO2 Intensity (lb/MWhr) 617.12 **CH4 Intensity (lb/MWhr)** 0.016 **N2O Intensity (lb/MWhr)** 0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised to be consistent with SB 100 RPS targets

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Trips and VMT - Weighted hauling trip length assuming 25.2% of trucks travel 170 mi distance with HAZ soil and 74.8% traveling 30 mi to Simi Valley

Grading - Exporting 127,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	230.00	1,435.00
tblConstructionPhase	NumDays	20.00	717.00
tblConstructionPhase	NumDays	20.00	65.00
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblEnergyUse	LightingElect	7.87	1.97
tblEnergyUse	LightingElect	2.14	0.54
tblEnergyUse	LightingElect	6.26	1.57
tblFireplaces	FireplaceDayYear	25.00	0.00

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	487.05	0.00
tblFireplaces	NumberNoFireplace	57.30	0.00
tblFireplaces	NumberWood	28.65	0.00
tblGrading	AcresOfGrading	43.50	8.09
tblGrading	AcresOfGrading	0.00	8.09
tblGrading	MaterialExported	0.00	127,000.00
tblLandUse	LandUseSquareFeet	445,764.00	212,350.00
tblLandUse	LandUseSquareFeet	573,000.00	645,806.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	10.23	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	15.08	7.45
tblLandUse	LotAcreage	0.02	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.016
tblProjectCharacteristics	CO2IntensityFactor	1096.12	617.12
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	263.58	197.69
tblSolidWaste	SolidWasteGenerationRate	0.03	0.02
tblSolidWaste	SolidWasteGenerationRate	21.42	16.07
tblSolidWaste	SolidWasteGenerationRate	168.08	126.06
tblSolidWaste	SolidWasteGenerationRate	4.56	3.42
tblSolidWaste	SolidWasteGenerationRate	1.12	0.84
tblTripsAndVMT	HaulingTripLength	20.00	65.30

tblTripsAndVMT	HaulingTripNumber	15,875.00	15,876.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	127.15	91.99
tblVehicleTrips	WD_TR	8.17	7.44
tblVehicleTrips	WD_TR	33.82	0.00
tblVehicleTrips	WD_TR	44.32	30.96
tblWater	IndoorWaterUseRate	37,333,256.68	2,986,605.00
tblWater	IndoorWaterUseRate	546,360.68	437,088.50
tblWater	IndoorWaterUseRate	7,787,598.39	6,230,079.00
tblWater	IndoorWaterUseRate	79,257.60	63,406.08
tblWoodstoves	NumberCatalytic	28.65	0.00
tblWoodstoves	NumberNoncatalytic	28.65	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.4726	169.7225	50.6128	0.4634	40.1353	2.3921	42.1774	11.9552	2.2007	13.8576	0.0000	49,868.6616	49,868.6616	3.7470	0.0000	49,962.3370
2020	7.0042	157.9970	56.6422	0.4579	19.5282	1.8042	21.3324	6.8971	1.6793	8.5764	0.0000	49,274.2754	49,274.2754	3.7260	0.0000	49,367.4266
2021	5.8602	39.5336	53.1292	0.1684	10.0134	1.0695	11.0829	2.6853	1.0048	3.6901	0.0000	17,031.9459	17,031.9459	1.2078	0.0000	17,062.1398
2022	5.4161	36.5243	50.2103	0.1648	10.0135	0.9126	10.9260	2.6853	0.8578	3.5431	0.0000	16,672.0147	16,672.0147	1.1672	0.0000	16,701.1939
2023	14.3894	32.2308	54.4765	0.1795	11.7572	0.8665	12.6237	3.1477	0.8182	3.9659	0.0000	18,117.1761	18,117.1761	1.1630	0.0000	18,146.2514
2024	14.0765	30.9528	52.0951	0.1761	11.7572	0.7689	12.5261	3.1478	0.7255	3.8733	0.0000	17,789.1019	17,789.1019	1.1334	0.0000	17,817.4366
2025	14.7753	38.2217	64.7997	0.1964	11.9249	1.0916	13.0165	3.1922	1.0199	4.2121	0.0000	19,743.3687	19,743.3687	1.8221	0.0000	19,788.9219
Maximum	**14.7753**	**169.7225**	**64.7997**	**0.4634**	**40.1353**	**2.3921**	**42.1774**	**11.9552**	**2.2007**	**13.8576**	**0.0000**	**49,868.6616**	**49,868.6616**	**3.7470**	**0.0000**	**49,962.3370**

2.1 Overall Construction (Maximum Daily Emission)

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					
2019	5.6185	156.2142	53.3100	0.4634	36.6781	1.4004	38.0784	10.1149	1.3724	11.4873	0.0000	49,868.6616	49,868.6616	3.7470	0.0000	49,962.3370
2020	5.3017	146.4509	57.6675	0.4579	16.0710	1.2863	17.3573	5.0569	1.2633	6.3202	0.0000	49,274.2754	49,274.2754	3.7260	0.0000	49,367.4266
2021	4.6332	36.3275	54.4277	0.1684	10.0134	1.0144	11.0278	2.6853	1.0071	3.6924	0.0000	17,031.9459	17,031.9459	1.2078	0.0000	17,062.1398
2022	4.3837	35.1347	51.7207	0.1648	10.0135	1.0071	11.0206	2.6853	1.0002	3.6855	0.0000	16,672.0147	16,672.0147	1.1672	0.0000	16,701.1939
2023	13.3583	32.1260	56.1276	0.1795	11.7572	1.0946	12.8518	3.1477	1.0876	4.2353	0.0000	18,117.1761	18,117.1761	1.1630	0.0000	18,146.2514
2024	13.1575	31.8733	53.8244	0.1761	11.7572	1.0933	12.8505	3.1478	1.0863	4.2341	0.0000	17,789.1019	17,789.1019	1.1334	0.0000	17,817.4366
2025	13.6161	42.9032	69.3297	0.1964	11.9249	1.7020	13.6269	3.1922	1.6951	4.8873	0.0000	19,743.3687	19,743.3687	1.8221	0.0000	19,788.9219
Maximum	**13.6161**	**156.2142**	**69.3297**	**0.4634**	**36.6781**	**1.7020**	**38.0784**	**10.1149**	**1.6951**	**11.4873**	**0.0000**	**49,868.6616**	**49,868.6616**	**3.7470**	**0.0000**	**49,962.3370**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**12.94**	**4.78**	**-3.78**	**0.00**	**6.01**	**3.45**	**5.56**	**10.92**	**-2.48**	**7.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Energy	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.3112	3,803.3112	0.0729	0.0697	3,825.9124
Mobile	8.5949	37.8313	108.1177	0.4466	40.3599	0.3258	40.6856	10.7979	0.3024	11.1003		45,605.8524	45,605.8524	2.0310		45,656.6277
Total	**29.3584**	**41.4451**	**157.4560**	**0.4681**	**40.3599**	**0.8294**	**41.1893**	**10.7979**	**0.8061**	**11.6039**	**0.0000**	**49,494.6946**	**49,494.6946**	**2.1865**	**0.0697**	**49,570.1356**

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	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Energy	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.3112	3,803.3112	0.0729	0.0697	3,825.9124
Mobile	8.5949	37.8313	108.1177	0.4466	40.3599	0.3258	40.6856	10.7979	0.3024	11.1003		45,605.8524	45,605.8524	2.0310		45,656.6277
Total	**29.3584**	**41.4451**	**157.4560**	**0.4681**	**40.3599**	**0.8294**	**41.1893**	**10.7979**	**0.8061**	**11.6039**	**0.0000**	**49,494.6946**	**49,494.6946**	**2.1865**	**0.0697**	**49,570.1356**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	11/29/2019	5	65	
2	Grading	Grading	12/2/2019	3/31/2020	5	87	
3	Building Construction	Building Construction	4/1/2020	9/30/2025	5	1435	
4	Architectural Coating	Architectural Coating	1/2/2023	9/30/2025	5	717	
5	Paving	Paving	6/30/2025	9/26/2025	5	65	

Acres of Grading (Site Preparation Phase): 8.09

Acres of Grading (Grading Phase): 8.09

Acres of Paving: 0.64

Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	15,876.00	14.70	6.90	65.30	LD_Mix	HDT_Mix	HHDT
Building Construction	9	779.00	204.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	156.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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					18.1983	0.0000	18.1983	9.9449	0.0000	9.9449			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.1983**	**2.3904**	**20.5886**	**9.9449**	**2.1991**	**12.1441**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

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					8.1892	0.0000	8.1892	4.4752	0.0000	4.4752			0.0000			0.0000
Off-Road	0.9312	19.0656	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**0.9312**	**19.0656**	**22.9600**	**0.0380**	**8.1892**	**0.9462**	**9.1354**	**4.4752**	**0.9462**	**5.4214**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

3.3 Grading - 2019

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					6.2858	0.0000	6.2858	3.3459	0.0000	3.3459			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.2858**	**1.3974**	**7.6832**	**3.3459**	**1.2856**	**4.6314**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

3.3 Grading - 2019

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	4.8172	141.3194	33.5962	0.4319	33.6818	0.6434	34.3252	8.5648	0.6155	9.1804		46,749.9119	46,749.9119	2.8116		46,820.2017
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**4.8922**	**141.3745**	**34.3194**	**0.4338**	**33.8495**	**0.6448**	**34.4943**	**8.6093**	**0.6169**	**9.2262**		**46,931.8549**	**46,931.8549**	**2.8178**		**47,002.3008**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8286	0.0000	2.8286	1.5056	0.0000	1.5056			0.0000			0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**2.8286**	**0.7555**	**3.5841**	**1.5056**	**0.7555**	**2.2612**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

3.3 Grading - 2019

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	4.8172	141.3194	33.5962	0.4319	33.6818	0.6434	34.3252	8.5648	0.6155	9.1804		46,749.9119	46,749.9119	2.8116		46,820.2017
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**4.8922**	**141.3745**	**34.3194**	**0.4338**	**33.8495**	**0.6448**	**34.4943**	**8.6093**	**0.6169**	**9.2262**		**46,931.8549**	**46,931.8549**	**2.8178**		**47,002.3008**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2858	0.0000	6.2858	3.3459	0.0000	3.3459			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.2858**	**1.2734**	**7.5592**	**3.3459**	**1.1716**	**4.5174**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	4.5064	131.5621	33.0011	0.4265	13.0748	0.5294	13.6041	3.5068	0.5065	4.0133		46,225.3734	46,225.3734	2.7915		46,295.1600
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**4.5754**	**131.6112**	**33.6579**	**0.4282**	**13.2424**	**0.5308**	**13.7732**	**3.5513**	**0.5078**	**4.0590**		**46,401.7903**	**46,401.7903**	**2.7970**		**46,471.7159**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8286	0.0000	2.8286	1.5056	0.0000	1.5056			0.0000			0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**2.8286**	**0.7555**	**3.5841**	**1.5056**	**0.7555**	**2.2612**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	4.5064	131.5621	33.0011	0.4265	13.0748	0.5294	13.6041	3.5068	0.5065	4.0133		46,225.3734	46,225.3734	2.7915		46,295.1600
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		176.4169	176.4169	5.5600e-003		176.5560
Total	**4.5754**	**131.6112**	**33.6579**	**0.4282**	**13.2424**	**0.5308**	**13.7732**	**3.5513**	**0.5078**	**4.0590**		**46,401.7903**	**46,401.7903**	**2.7970**		**46,471.7159**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7256	21.7000	5.6856	0.0529	1.3060	0.1021	1.4081	0.3760	0.0977	0.4737		5,651.3038	5,651.3038	0.3449		5,659.9253
Worker	3.5850	2.5504	34.1081	0.0920	8.7074	0.0728	8.7802	2.3092	0.0671	2.3763		9,161.9193	9,161.9193	0.2889		9,169.1407
Total	**4.3105**	**24.2504**	**39.7937**	**0.1449**	**10.0134**	**0.1749**	**10.1883**	**2.6853**	**0.1648**	**2.8500**		**14,813.2231**	**14,813.2231**	**0.6337**		**14,829.0660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7256	21.7000	5.6856	0.0529	1.3060	0.1021	1.4081	0.3760	0.0977	0.4737		5,651.303 8	5,651.303 8	0.3449		5,659.925 3
Worker	3.5850	2.5504	34.1081	0.0920	8.7074	0.0728	8.7802	2.3092	0.0671	2.3763		9,161.919 3	9,161.919 3	0.2889		9,169.140 7
Total	**4.3105**	**24.2504**	**39.7937**	**0.1449**	**10.0134**	**0.1749**	**10.1883**	**2.6853**	**0.1648**	**2.8500**		**14,813.22 31**	**14,813.22 31**	**0.6337**		**14,829.06 60**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6201	19.8063	5.1779	0.0525	1.3060	0.0405	1.3465	0.3760	0.0387	0.4148		5,607.564 9	5,607.564 9	0.3304		5,615.823 8
Worker	3.3392	2.2952	31.3761	0.0891	8.7074	0.0704	8.7777	2.3092	0.0648	2.3741		8,871.017 2	8,871.017 2	0.2614		8,877.551 8
Total	**3.9593**	**22.1015**	**36.5540**	**0.1415**	**10.0134**	**0.1109**	**10.1243**	**2.6853**	**0.1035**	**2.7888**		**14,478.58 20**	**14,478.58 20**	**0.5917**		**14,493.37 56**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6201	19.8063	5.1779	0.0525	1.3060	0.0405	1.3465	0.3760	0.0387	0.4148		5,607.564 9	5,607.564 9	0.3304		5,615.823 8
Worker	3.3392	2.2952	31.3761	0.0891	8.7074	0.0704	8.7777	2.3092	0.0648	2.3741		8,871.017 2	8,871.017 2	0.2614		8,877.551 8
Total	**3.9593**	**22.1015**	**36.5540**	**0.1415**	**10.0134**	**0.1109**	**10.1243**	**2.6853**	**0.1035**	**2.7888**		**14,478.58 20**	**14,478.58 20**	**0.5917**		**14,493.37 56**

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		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5820	18.8354	4.8991	0.0520	1.3061	0.0354	1.3415	0.3760	0.0339	0.4099		5,558.712 1	5,558.712 1	0.3190		5,566.687 0
Worker	3.1279	2.0733	28.9478	0.0859	8.7074	0.0682	8.7756	2.3092	0.0628	2.3720		8,558.969 0	8,558.969 0	0.2362		8,564.874 7
Total	**3.7098**	**20.9086**	**33.8469**	**0.1379**	**10.0135**	**0.1036**	**10.1170**	**2.6853**	**0.0966**	**2.7819**		**14,117.68 11**	**14,117.68 11**	**0.5552**		**14,131.56 17**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5820	18.8354	4.8991	0.0520	1.3061	0.0354	1.3415	0.3760	0.0339	0.4099		5,558.7121	5,558.7121	0.3190		5,566.6870
Worker	3.1279	2.0733	28.9478	0.0859	8.7074	0.0682	8.7756	2.3092	0.0628	2.3720		8,558.9690	8,558.9690	0.2362		8,564.8747
Total	**3.7098**	**20.9086**	**33.8469**	**0.1379**	**10.0135**	**0.1036**	**10.1170**	**2.6853**	**0.0966**	**2.7819**		**14,117.6811**	**14,117.6811**	**0.5552**		**14,131.5617**

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
Total	**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**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4318	14.2916	4.4244	0.0503	1.3061	0.0165	1.3226	0.3761	0.0158	0.3918		5,383.711 5	5,383.711 5	0.2827		5,390.778 5
Worker	2.9373	1.8758	26.6584	0.0827	8.7074	0.0662	8.7736	2.3092	0.0610	2.3702		8,245.574 7	8,245.574 7	0.2130		8,250.899 5
Total	**3.3691**	**16.1673**	**31.0829**	**0.1330**	**10.0135**	**0.0827**	**10.0962**	**2.6853**	**0.0768**	**2.7621**		**13,629.28 62**	**13,629.28 62**	**0.4957**		**13,641.67 81**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.209 9**	**2,555.209 9**	**0.6079**		**2,570.406 1**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4318	14.2916	4.4244	0.0503	1.3061	0.0165	1.3226	0.3761	0.0158	0.3918		5,383.711 5	5,383.711 5	0.2827		5,390.778 5
Worker	2.9373	1.8758	26.6584	0.0827	8.7074	0.0662	8.7736	2.3092	0.0610	2.3702		8,245.574 7	8,245.574 7	0.2130		8,250.899 5
Total	**3.3691**	**16.1673**	**31.0829**	**0.1330**	**10.0135**	**0.0827**	**10.0962**	**2.6853**	**0.0768**	**2.7621**		**13,629.28 62**	**13,629.28 62**	**0.4957**		**13,641.67 81**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4214	14.2371	4.2897	0.0500	1.3061	0.0163	1.3224	0.3761	0.0156	0.3917		5,361.863 2	5,361.863 2	0.2787		5,368.829 5
Worker	2.7786	1.7106	24.8518	0.0802	8.7074	0.0653	8.7727	2.3092	0.0601	2.3693		7,990.033 7	7,990.033 7	0.1954		7,994.918 8
Total	**3.2000**	**15.9477**	**29.1414**	**0.1302**	**10.0135**	**0.0816**	**10.0951**	**2.6853**	**0.0757**	**2.7610**		**13,351.89 69**	**13,351.89 69**	**0.4741**		**13,363.74 83**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4214	14.2371	4.2897	0.0500	1.3061	0.0163	1.3224	0.3761	0.0156	0.3917		5,361.863 2	5,361.863 2	0.2787		5,368.829 5
Worker	2.7786	1.7106	24.8518	0.0802	8.7074	0.0653	8.7727	2.3092	0.0601	2.3693		7,990.033 7	7,990.033 7	0.1954		7,994.918 8
Total	**3.2000**	**15.9477**	**29.1414**	**0.1302**	**10.0135**	**0.0816**	**10.0951**	**2.6853**	**0.0757**	**2.7610**		**13,351.89 69**	**13,351.89 69**	**0.4741**		**13,363.74 83**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.474 4**	**2,556.474 4**	**0.6010**		**2,571.498 1**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4108	14.1162	4.1795	0.0497	1.3062	0.0161	1.3222	0.3761	0.0153	0.3914		5,332.318 9	5,332.318 9	0.2747		5,339.187 5
Worker	2.6384	1.5652	23.0817	0.0770	8.7074	0.0639	8.7713	2.3092	0.0588	2.3681		7,680.433 4	7,680.433 4	0.1783		7,684.889 7
Total	**3.0492**	**15.6814**	**27.2612**	**0.1267**	**10.0135**	**0.0800**	**10.0935**	**2.6853**	**0.0742**	**2.7595**		**13,012.75 24**	**13,012.75 24**	**0.4530**		**13,024.07 72**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,556.474 4**	**2,556.474 4**	**0.6010**		**2,571.498 1**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4108	14.1162	4.1795	0.0497	1.3062	0.0161	1.3222	0.3761	0.0153	0.3914		5,332.3189	5,332.3189	0.2747		5,339.1875
Worker	2.6384	1.5652	23.0817	0.0770	8.7074	0.0639	8.7713	2.3092	0.0588	2.3681		7,680.4334	7,680.4334	0.1783		7,684.8897
Total	**3.0492**	**15.6814**	**27.2612**	**0.1267**	**10.0135**	**0.0800**	**10.0935**	**2.6853**	**0.0742**	**2.7595**		**13,012.7524**	**13,012.7524**	**0.4530**		**13,024.0772**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**8.8594**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5882	0.3756	5.3385	0.0166	1.7437	0.0133	1.7570	0.4624	0.0122	0.4747		1,651.231 9	1,651.231 9	0.0427		1,652.298 2
Total	**0.5882**	**0.3756**	**5.3385**	**0.0166**	**1.7437**	**0.0133**	**1.7570**	**0.4624**	**0.0122**	**0.4747**		**1,651.231 9**	**1,651.231 9**	**0.0427**		**1,652.298 2**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5882	0.3756	5.3385	0.0166	1.7437	0.0133	1.7570	0.4624	0.0122	0.4747		1,651.2319	1,651.2319	0.0427		1,652.2982
Total	**0.5882**	**0.3756**	**5.3385**	**0.0166**	**1.7437**	**0.0133**	**1.7570**	**0.4624**	**0.0122**	**0.4747**		**1,651.2319**	**1,651.2319**	**0.0427**		**1,652.2982**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**8.8485**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.5 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5564	0.3426	4.9767	0.0161	1.7437	0.0131	1.7568	0.4624	0.0120	0.4745		1,600.0581	1,600.0581	0.0391		1,601.0364
Total	**0.5564**	**0.3426**	**4.9767**	**0.0161**	**1.7437**	**0.0131**	**1.7568**	**0.4624**	**0.0120**	**0.4745**		**1,600.0581**	**1,600.0581**	**0.0391**		**1,601.0364**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.5 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5564	0.3426	4.9767	0.0161	1.7437	0.0131	1.7568	0.4624	0.0120	0.4745		1,600.0581	1,600.0581	0.0391		1,601.0364
Total	**0.5564**	**0.3426**	**4.9767**	**0.0161**	**1.7437**	**0.0131**	**1.7568**	**0.4624**	**0.0120**	**0.4745**		**1,600.0581**	**1,600.0581**	**0.0391**		**1,601.0364**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.8386**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.5 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5284	0.3134	4.6223	0.0154	1.7437	0.0128	1.7565	0.4624	0.0118	0.4742		1,538.058 6	1,538.058 6	0.0357		1,538.951 0
Total	**0.5284**	**0.3134**	**4.6223**	**0.0154**	**1.7437**	**0.0128**	**1.7565**	**0.4624**	**0.0118**	**0.4742**		**1,538.058 6**	**1,538.058 6**	**0.0357**		**1,538.951 0**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.5 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5284	0.3134	4.6223	0.0154	1.7437	0.0128	1.7565	0.4624	0.0118	0.4742		1,538.0586	1,538.0586	0.0357		1,538.9510
Total	**0.5284**	**0.3134**	**4.6223**	**0.0154**	**1.7437**	**0.0128**	**1.7565**	**0.4624**	**0.0118**	**0.4742**		**1,538.0586**	**1,538.0586**	**0.0357**		**1,538.9510**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9410**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0508	0.0301	0.4445	1.4800e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1300e-003	0.0456		147.8903	147.8903	3.4300e-003		147.9761
Total	**0.0508**	**0.0301**	**0.4445**	**1.4800e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1300e-003**	**0.0456**		**147.8903**	**147.8903**	**3.4300e-003**		**147.9761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5609	11.2952	17.2957	0.0228		0.6093	0.6093		0.6093	0.6093	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5867**	**11.2952**	**17.2957**	**0.0228**		**0.6093**	**0.6093**		**0.6093**	**0.6093**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0508	0.0301	0.4445	1.4800e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1300e-003	0.0456		147.8903	147.8903	3.4300e-003		147.9761
Total	**0.0508**	**0.0301**	**0.4445**	**1.4800e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1300e-003**	**0.0456**		**147.8903**	**147.8903**	**3.4300e-003**		**147.9761**

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	8.5949	37.8313	108.1177	0.4466	40.3599	0.3258	40.6856	10.7979	0.3024	11.1003		45,605.85 24	45,605.85 24	2.0310		45,656.62 77
Unmitigated	8.5949	37.8313	108.1177	0.4466	40.3599	0.3258	40.6856	10.7979	0.3024	11.1003		45,605.85 24	45,605.85 24	2.0310		45,656.62 77

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,779.05	3,661.47	3357.78	10,209,718	10,209,718
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	165.58	285.07	237.31	262,888	262,888
Hotel	2,284.08	2,514.33	1826.65	5,372,764	5,372,764
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Strip Mall	33.13	44.98	21.86	63,188	63,188
Total	5,261.84	6,505.85	5,443.60	15,908,557	15,908,557

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
City Park	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Enclosed Parking with Elevator	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
High Turnover (Sit Down Restaurant)	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Hotel	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Other Asphalt Surfaces	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Recreational Swimming Pool	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Strip Mall	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.311 2	3,803.311 2	0.0729	0.0697	3,825.912 4
NaturalGas Unmitigated	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.311 2	3,803.311 2	0.0729	0.0697	3,825.912 4

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					
Apartments Mid Rise	17234.2	0.1859	1.5883	0.6759	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.5575	2,027.5575	0.0389	0.0372	2,039.6063
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	1137.99	0.0123	0.1116	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003		133.8817	133.8817	2.5700e-003	2.4500e-003	134.6773
Hotel	13951.1	0.1505	1.3678	1.1489	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.3064	1,641.3064	0.0315	0.0301	1,651.0598
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
Recreational Swimming Pool	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
Strip Mall	4.80767	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5656	0.5656	1.0000e-005	1.0000e-005	0.5690
Total		**0.3486**	**3.0681**	**1.9189**	**0.0190**		**0.2409**	**0.2409**		**0.2409**	**0.2409**		**3,803.3112**	**3,803.3112**	**0.0729**	**0.0697**	**3,825.9124**

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					
Apartments Mid Rise	17.2342	0.1859	1.5883	0.6759	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.5575	2,027.5575	0.0389	0.0372	2,039.6063
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	1.13799	0.0123	0.1116	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003		133.8817	133.8817	2.5700e-003	2.4500e-003	134.6773
Hotel	13.9511	0.1505	1.3678	1.1489	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.3064	1,641.3064	0.0315	0.0301	1,651.0598
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
Recreational Swimming Pool	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
Strip Mall	0.00480767	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5656	0.5656	1.0000e-005	1.0000e-005	0.5690
Total		**0.3486**	**3.0681**	**1.9189**	**0.0190**		**0.2409**	**0.2409**		**0.2409**	**0.2409**		**3,803.3112**	**3,803.3112**	**0.0729**	**0.0697**	**3,825.9124**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Unmitigated	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955

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	1.7027					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.2766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4356	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627		85.5310	85.5310	0.0826		87.5955
Total	**20.4149**	**0.5458**	**47.4195**	**2.5100e-003**		**0.2627**	**0.2627**		**0.2627**	**0.2627**	**0.0000**	**85.5310**	**85.5310**	**0.0826**	**0.0000**	**87.5955**

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	1.7027					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.2766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4356	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627		85.5310	85.5310	0.0826		87.5955
Total	**20.4149**	**0.5458**	**47.4195**	**2.5100e-003**		**0.2627**	**0.2627**		**0.2627**	**0.2627**	**0.0000**	**85.5310**	**85.5310**	**0.0826**	**0.0000**	**87.5955**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Terra Mixed Use Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
High Turnover (Sit Down Restaurant)	1.80	1000sqft	0.00	1,800.00	0
Hotel	307.00	Room	0.00	212,350.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	573.00	Dwelling Unit	7.45	645,806.00	1639
Strip Mall	1.07	1000sqft	0.00	1,070.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 33

Climate Zone 12 **Operational Year** 2026

Utility Company Burbank Water & Power

CO2 Intensity (lb/MWhr) 617.12 **CH4 Intensity (lb/MWhr)** 0.016 **N2O Intensity (lb/MWhr)** 0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised to be consistent with SB 100 RPS targets

Land Use - Applicant provided information from site plan

Construction Phase - Applicant provided construction schedule

Trips and VMT - Weighted hauling trip length assuming 25.2% of trucks travel 170 mi distance with HAZ soil and 74.8% traveling 30 mi to Simi Valley

Grading - Exporting 127,000 CY of total material (concrete and dirt) and grading entire 8.09 site

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - SCAQMD Rule 401 and CARB in-use off-road regulation

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	65.00
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	230.00	1,435.00
tblConstructionPhase	NumDays	20.00	717.00
tblConstructionPhase	NumDays	20.00	65.00
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblEnergyUse	LightingElect	7.87	1.97
tblEnergyUse	LightingElect	2.14	0.54
tblEnergyUse	LightingElect	6.26	1.57
tblFireplaces	FireplaceDayYear	25.00	0.00

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	487.05	0.00
tblFireplaces	NumberNoFireplace	57.30	0.00
tblFireplaces	NumberWood	28.65	0.00
tblGrading	AcresOfGrading	43.50	8.09
tblGrading	AcresOfGrading	0.00	8.09
tblGrading	MaterialExported	0.00	127,000.00
tblLandUse	LandUseSquareFeet	445,764.00	212,350.00
tblLandUse	LandUseSquareFeet	573,000.00	645,806.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	10.23	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	15.08	7.45
tblLandUse	LotAcreage	0.02	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.016
tblProjectCharacteristics	CO2IntensityFactor	1096.12	617.12
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblSolidWaste	SolidWasteGenerationRate	263.58	197.69
tblSolidWaste	SolidWasteGenerationRate	0.03	0.02
tblSolidWaste	SolidWasteGenerationRate	21.42	16.07
tblSolidWaste	SolidWasteGenerationRate	168.08	126.06
tblSolidWaste	SolidWasteGenerationRate	4.56	3.42
tblSolidWaste	SolidWasteGenerationRate	1.12	0.84
tblTripsAndVMT	HaulingTripLength	20.00	65.30

tblTripsAndVMT	HaulingTripNumber	15,875.00	15,876.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	127.15	91.99
tblVehicleTrips	WD_TR	8.17	7.44
tblVehicleTrips	WD_TR	33.82	0.00
tblVehicleTrips	WD_TR	44.32	30.96
tblWater	IndoorWaterUseRate	37,333,256.68	2,986,605.00
tblWater	IndoorWaterUseRate	546,360.68	437,088.50
tblWater	IndoorWaterUseRate	7,787,598.39	6,230,079.00
tblWater	IndoorWaterUseRate	79,257.60	63,406.08
tblWoodstoves	NumberCatalytic	28.65	0.00
tblWoodstoves	NumberNoncatalytic	28.65	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.5224	173.8097	51.2058	0.4608	40.1353	2.3921	42.1813	11.9552	2.2007	13.8613	0.0000	49,590.4808	49,590.4808	3.7870	0.0000	49,685.1569
2020	7.0492	161.7719	54.3579	0.4553	19.5282	1.8068	21.3350	6.8971	1.6818	8.5789	0.0000	48,995.0331	48,995.0331	3.7634	0.0000	49,089.1190
2021	6.2663	39.7381	50.9900	0.1618	10.0134	1.0708	11.0842	2.6853	1.0061	3.6913	0.0000	16,360.0486	16,360.0486	1.2139	0.0000	16,390.3959
2022	5.8060	36.6943	48.2069	0.1584	10.0135	0.9137	10.9272	2.6853	0.8589	3.5442	0.0000	16,019.0233	16,019.0233	1.1736	0.0000	16,048.3626
2023	14.8310	32.4054	52.0230	0.1723	11.7572	0.8674	12.6246	3.1477	0.8190	3.9668	0.0000	17,393.5180	17,393.5180	1.1636	0.0000	17,422.6075
2024	14.5063	31.1091	49.7863	0.1692	11.7572	0.7696	12.5269	3.1478	0.7262	3.8740	0.0000	17,084.6219	17,084.6219	1.1345	0.0000	17,112.9839
2025	15.2014	38.3631	62.6084	0.1896	11.9249	1.0923	13.0172	3.1922	1.0205	4.2128	0.0000	19,053.8623	19,053.8623	1.8236	0.0000	19,099.4526
Maximum	**15.2014**	**173.8097**	**62.6084**	**0.4608**	**40.1353**	**2.3921**	**42.1813**	**11.9552**	**2.2007**	**13.8613**	**0.0000**	**49,590.4808**	**49,590.4808**	**3.7870**	**0.0000**	**49,685.1569**

2.1 Overall Construction (Maximum Daily Emission)

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					
2019	5.6682	160.3015	53.9030	0.4608	36.6781	1.4042	38.0823	10.1149	1.3761	11.4910	0.0000	49,590.4808	49,590.4808	3.7870	0.0000	49,685.1569
2020	5.4133	150.2257	55.3832	0.4553	16.0710	1.2889	17.3599	5.0569	1.2658	6.3227	0.0000	48,995.0331	48,995.0331	3.7634	0.0000	49,089.1190
2021	5.0393	36.5321	52.2886	0.1618	10.0134	1.0157	11.0291	2.6853	1.0083	3.6936	0.0000	16,360.0486	16,360.0486	1.2139	0.0000	16,390.3958
2022	4.7737	35.3047	49.7173	0.1584	10.0135	1.0083	11.0217	2.6853	1.0013	3.6866	0.0000	16,019.0233	16,019.0233	1.1736	0.0000	16,048.3626
2023	13.8000	32.3005	53.6741	0.1723	11.7572	1.0955	12.8527	3.1477	1.0884	4.2362	0.0000	17,393.5180	17,393.5180	1.1636	0.0000	17,422.6075
2024	13.5873	32.0296	51.5155	0.1692	11.7572	1.0940	12.8513	3.1478	1.0871	4.2348	0.0000	17,084.6219	17,084.6219	1.1345	0.0000	17,112.9839
2025	14.0423	43.0446	67.1385	0.1896	11.9249	1.7026	13.6276	3.1922	1.6957	4.8879	0.0000	19,053.8623	19,053.8623	1.8236	0.0000	19,099.4526
Maximum	**14.0423**	**160.3015**	**67.1385**	**0.4608**	**36.6781**	**1.7026**	**38.0823**	**10.1149**	**1.6957**	**11.4910**	**0.0000**	**49,590.4808**	**49,590.4808**	**3.7870**	**0.0000**	**49,685.1569**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**12.44**	**4.70**	**-3.91**	**0.00**	**6.01**	**3.40**	**5.56**	**10.92**	**-2.52**	**7.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Energy	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.3112	3,803.3112	0.0729	0.0697	3,825.9124
Mobile	8.3191	38.5090	102.8760	0.4252	40.3599	0.3271	40.6869	10.7979	0.3037	11.1015		43,444.3271	43,444.3271	2.0341		43,495.1787
Total	**29.0826**	**42.1228**	**152.2144**	**0.4467**	**40.3599**	**0.8307**	**41.1905**	**10.7979**	**0.8073**	**11.6052**	**0.0000**	**47,333.1692**	**47,333.1692**	**2.1895**	**0.0697**	**47,408.6865**

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	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Energy	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.3112	3,803.3112	0.0729	0.0697	3,825.9124
Mobile	8.3191	38.5090	102.8760	0.4252	40.3599	0.3271	40.6869	10.7979	0.3037	11.1015		43,444.3271	43,444.3271	2.0341		43,495.1787
Total	**29.0826**	**42.1228**	**152.2144**	**0.4467**	**40.3599**	**0.8307**	**41.1905**	**10.7979**	**0.8073**	**11.6052**	**0.0000**	**47,333.1692**	**47,333.1692**	**2.1895**	**0.0697**	**47,408.6865**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	11/29/2019	5	65	
2	Grading	Grading	12/2/2019	3/31/2020	5	87	
3	Building Construction	Building Construction	4/1/2020	9/30/2025	5	1435	
4	Architectural Coating	Architectural Coating	1/2/2023	9/30/2025	5	717	
5	Paving	Paving	6/30/2025	9/26/2025	5	65	

Acres of Grading (Site Preparation Phase): 8.09

Acres of Grading (Grading Phase): 8.09

Acres of Paving: 0.64

Residential Indoor: 1,307,757; Residential Outdoor: 435,919; Non-Residential Indoor: 322,830; Non-Residential Outdoor: 107,610; Striped Parking Area: 38,556 (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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	15,876.00	14.70	6.90	65.30	LD_Mix	HDT_Mix	HHDT
Building Construction	9	779.00	204.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	156.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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					18.1983	0.0000	18.1983	9.9449	0.0000	9.9449			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.452 9	3,766.452 9	1.1917		3,796.244 5
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.1983**	**2.3904**	**20.5886**	**9.9449**	**2.1991**	**12.1441**		**3,766.452 9**	**3,766.452 9**	**1.1917**		**3,796.244 5**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

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					8.1892	0.0000	8.1892	4.4752	0.0000	4.4752			0.0000			0.0000
Off-Road	0.9312	19.0656	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**0.9312**	**19.0656**	**22.9600**	**0.0380**	**8.1892**	**0.9462**	**9.1354**	**4.4752**	**0.9462**	**5.4214**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

3.3 Grading - 2019

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					6.2858	0.0000	6.2858	3.3459	0.0000	3.3459			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.806 8	2,936.806 8	0.9292		2,960.036 1
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.2858**	**1.3974**	**7.6832**	**3.3459**	**1.2856**	**4.6314**		**2,936.806 8**	**2,936.806 8**	**0.9292**		**2,960.036 1**

3.3 Grading - 2019

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	4.8588	145.4007	34.2487	0.4295	33.6818	0.6472	34.3290	8.5648	0.6192	9.1840		46,482.3544	46,482.3544	2.8520		46,553.6538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**4.9419**	**145.4617**	**34.9124**	**0.4312**	**33.8495**	**0.6487**	**34.4981**	**8.6093**	**0.6205**	**9.2298**		**46,653.6740**	**46,653.6740**	**2.8579**		**46,725.1207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8286	0.0000	2.8286	1.5056	0.0000	1.5056			0.0000			0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**2.8286**	**0.7555**	**3.5841**	**1.5056**	**0.7555**	**2.2612**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

3.3 Grading - 2019

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	4.8588	145.4007	34.2487	0.4295	33.6818	0.6472	34.3290	8.5648	0.6192	9.1840		46,482.3544	46,482.3544	2.8520		46,553.6538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**4.9419**	**145.4617**	**34.9124**	**0.4312**	**33.8495**	**0.6487**	**34.4981**	**8.6093**	**0.6205**	**9.2298**		**46,653.6740**	**46,653.6740**	**2.8579**		**46,725.1207**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2858	0.0000	6.2858	3.3459	0.0000	3.3459			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.2858**	**1.2734**	**7.5592**	**3.3459**	**1.1716**	**4.5174**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	4.5438	135.3316	33.5783	0.4240	13.0748	0.5320	13.6067	3.5068	0.5089	4.0157		45,956.4349	45,956.4349	2.8292		46,027.1644
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**4.6204**	**135.3860**	**34.1798**	**0.4256**	**13.2424**	**0.5334**	**13.7758**	**3.5513**	**0.5102**	**4.0615**		**46,122.5479**	**46,122.5479**	**2.8344**		**46,193.4084**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8286	0.0000	2.8286	1.5056	0.0000	1.5056			0.0000			0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**2.8286**	**0.7555**	**3.5841**	**1.5056**	**0.7555**	**2.2612**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.3 Grading - 2020

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	4.5438	135.3316	33.5783	0.4240	13.0748	0.5320	13.6067	3.5068	0.5089	4.0157		45,956.4349	45,956.4349	2.8292		46,027.1644
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		166.1131	166.1131	5.2400e-003		166.2440
Total	**4.6204**	**135.3860**	**34.1798**	**0.4256**	**13.2424**	**0.5334**	**13.7758**	**3.5513**	**0.5102**	**4.0615**		**46,122.5479**	**46,122.5479**	**2.8344**		**46,193.4084**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7585	21.6955	6.2706	0.0515	1.3060	0.1038	1.4098	0.3760	0.0993	0.4753		5,496.760 9	5,496.760 9	0.3676		5,505.950 0
Worker	3.9809	2.8237	31.2387	0.0866	8.7074	0.0728	8.7802	2.3092	0.0671	2.3763		8,626.804 8	8,626.804 8	0.2719		8,633.602 6
Total	**4.7394**	**24.5192**	**37.5094**	**0.1381**	**10.0134**	**0.1766**	**10.1899**	**2.6853**	**0.1663**	**2.8516**		**14,123.56 57**	**14,123.56 57**	**0.6395**		**14,139.55 26**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,553.063 1**	**2,553.063 1**	**0.6229**		**2,568.634 5**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7585	21.6955	6.2706	0.0515	1.3060	0.1038	1.4098	0.3760	0.0993	0.4753		5,496.760 9	5,496.760 9	0.3676		5,505.950 0
Worker	3.9809	2.8237	31.2387	0.0866	8.7074	0.0728	8.7802	2.3092	0.0671	2.3763		8,626.804 8	8,626.804 8	0.2719		8,633.602 6
Total	**4.7394**	**24.5192**	**37.5094**	**0.1381**	**10.0134**	**0.1766**	**10.1899**	**2.6853**	**0.1663**	**2.8516**		**14,123.56 57**	**14,123.56 57**	**0.6395**		**14,139.55 26**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6510	19.7653	5.7277	0.0510	1.3060	0.0418	1.3478	0.3760	0.0400	0.4160		5,453.848 7	5,453.848 7	0.3521		5,462.650 8
Worker	3.7144	2.5407	28.6871	0.0838	8.7074	0.0704	8.7777	2.3092	0.0648	2.3741		8,352.836 0	8,352.836 0	0.2458		8,358.980 8
Total	**4.3654**	**22.3060**	**34.4148**	**0.1349**	**10.0134**	**0.1122**	**10.1256**	**2.6853**	**0.1048**	**2.7901**		**13,806.68 47**	**13,806.68 47**	**0.5979**		**13,821.63 16**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6510	19.7653	5.7277	0.0510	1.3060	0.0418	1.3478	0.3760	0.0400	0.4160		5,453.848 7	5,453.848 7	0.3521		5,462.650 8
Worker	3.7144	2.5407	28.6871	0.0838	8.7074	0.0704	8.7777	2.3092	0.0648	2.3741		8,352.836 0	8,352.836 0	0.2458		8,358.980 8
Total	**4.3654**	**22.3060**	**34.4148**	**0.1349**	**10.0134**	**0.1122**	**10.1256**	**2.6853**	**0.1048**	**2.7901**		**13,806.68 47**	**13,806.68 47**	**0.5979**		**13,821.63 16**

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		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6111	18.7842	5.4217	0.0506	1.3061	0.0366	1.3426	0.3760	0.0350	0.4110		5,405.393 7	5,405.393 7	0.3397		5,413.886 5
Worker	3.4887	2.2945	26.4218	0.0809	8.7074	0.0682	8.7756	2.3092	0.0628	2.3720		8,059.296 1	8,059.296 1	0.2219		8,064.843 9
Total	**4.0998**	**21.0787**	**31.8435**	**0.1314**	**10.0135**	**0.1047**	**10.1182**	**2.6853**	**0.0978**	**2.7830**		**13,464.68 98**	**13,464.68 98**	**0.5616**		**13,478.73 04**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6111	18.7842	5.4217	0.0506	1.3061	0.0366	1.3426	0.3760	0.0350	0.4110		5,405.393 7	5,405.393 7	0.3397		5,413.886 5
Worker	3.4887	2.2945	26.4218	0.0809	8.7074	0.0682	8.7756	2.3092	0.0628	2.3720		8,059.296 1	8,059.296 1	0.2219		8,064.843 9
Total	**4.0998**	**21.0787**	**31.8435**	**0.1314**	**10.0135**	**0.1047**	**10.1182**	**2.6853**	**0.0978**	**2.7830**		**13,464.68 98**	**13,464.68 98**	**0.5616**		**13,478.73 04**

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		2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.209 9**	**2,555.209 9**	**0.6079**		**2,570.406 1**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4540	14.2267	4.8177	0.0489	1.3061	0.0174	1.3235	0.3761	0.0166	0.3927		5,237.5227	5,237.5227	0.2991		5,244.9993
Worker	3.2867	2.0752	24.2866	0.0779	8.7074	0.0662	8.7736	2.3092	0.0610	2.3702		7,764.4533	7,764.4533	0.1998		7,769.4487
Total	**3.7407**	**16.3019**	**29.1043**	**0.1268**	**10.0135**	**0.0836**	**10.0971**	**2.6853**	**0.0776**	**2.7629**		**13,001.9760**	**13,001.9760**	**0.4989**		**13,014.4479**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4540	14.2267	4.8177	0.0489	1.3061	0.0174	1.3235	0.3761	0.0166	0.3927		5,237.522 7	5,237.522 7	0.2991		5,244.999 3
Worker	3.2867	2.0752	24.2866	0.0779	8.7074	0.0662	8.7736	2.3092	0.0610	2.3702		7,764.453 3	7,764.453 3	0.1998		7,769.448 7
Total	**3.7407**	**16.3019**	**29.1043**	**0.1268**	**10.0135**	**0.0836**	**10.0971**	**2.6853**	**0.0776**	**2.7629**		**13,001.97 60**	**13,001.97 60**	**0.4989**		**13,014.44 79**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4428	14.1756	4.6716	0.0487	1.3061	0.0171	1.3232	0.3761	0.0163	0.3924		5,217.209 7	5,217.209 7	0.2945		5,224.572 9
Worker	3.1189	1.8920	22.6099	0.0755	8.7074	0.0653	8.7727	2.3092	0.0601	2.3693		7,523.611 4	7,523.611 4	0.1831		7,528.188 6
Total	**3.5617**	**16.0677**	**27.2815**	**0.1241**	**10.0135**	**0.0823**	**10.0958**	**2.6853**	**0.0764**	**2.7617**		**12,740.82 11**	**12,740.82 11**	**0.4776**		**12,752.76 15**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4428	14.1756	4.6716	0.0487	1.3061	0.0171	1.3232	0.3761	0.0163	0.3924		5,217.2097	5,217.2097	0.2945		5,224.5729
Worker	3.1189	1.8920	22.6099	0.0755	8.7074	0.0653	8.7727	2.3092	0.0601	2.3693		7,523.6114	7,523.6114	0.1831		7,528.1886
Total	**3.5617**	**16.0677**	**27.2815**	**0.1241**	**10.0135**	**0.0823**	**10.0958**	**2.6853**	**0.0764**	**2.7617**		**12,740.8211**	**12,740.8211**	**0.4776**		**12,752.7615**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4315	14.0556	4.5523	0.0484	1.3062	0.0167	1.3229	0.3761	0.0160	0.3921		5,189.2347	5,189.2347	0.2901		5,196.4872
Worker	2.9708	1.7307	20.9791	0.0725	8.7074	0.0639	8.7713	2.3092	0.0588	2.3681		7,232.3672	7,232.3672	0.1669		7,236.5391
Total	**3.4024**	**15.7864**	**25.5315**	**0.1209**	**10.0135**	**0.0806**	**10.0942**	**2.6853**	**0.0748**	**2.7601**		**12,421.6019**	**12,421.6019**	**0.4570**		**12,433.0263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4315	14.0556	4.5523	0.0484	1.3062	0.0167	1.3229	0.3761	0.0160	0.3921		5,189.2347	5,189.2347	0.2901		5,196.4872
Worker	2.9708	1.7307	20.9791	0.0725	8.7074	0.0639	8.7713	2.3092	0.0588	2.3681		7,232.3672	7,232.3672	0.1669		7,236.5391
Total	**3.4024**	**15.7864**	**25.5315**	**0.1209**	**10.0135**	**0.0806**	**10.0942**	**2.6853**	**0.0748**	**2.7601**		**12,421.6019**	**12,421.6019**	**0.4570**		**12,433.0263**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**8.8594**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6582	0.4156	4.8636	0.0156	1.7437	0.0133	1.7570	0.4624	0.0122	0.4747		1,554.8841	1,554.8841	0.0400		1,555.8845
Total	**0.6582**	**0.4156**	**4.8636**	**0.0156**	**1.7437**	**0.0133**	**1.7570**	**0.4624**	**0.0122**	**0.4747**		**1,554.8841**	**1,554.8841**	**0.0400**		**1,555.8845**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6582	0.4156	4.8636	0.0156	1.7437	0.0133	1.7570	0.4624	0.0122	0.4747		1,554.884 1	1,554.884 1	0.0400		1,555.884 5
Total	**0.6582**	**0.4156**	**4.8636**	**0.0156**	**1.7437**	**0.0133**	**1.7570**	**0.4624**	**0.0122**	**0.4747**		**1,554.884 1**	**1,554.884 1**	**0.0400**		**1,555.884 5**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**8.8485**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.5 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6246	0.3789	4.5278	0.0151	1.7437	0.0131	1.7568	0.4624	0.0120	0.4745		1,506.653 9	1,506.653 9	0.0367		1,507.570 5
Total	**0.6246**	**0.3789**	**4.5278**	**0.0151**	**1.7437**	**0.0131**	**1.7568**	**0.4624**	**0.0120**	**0.4745**		**1,506.653 9**	**1,506.653 9**	**0.0367**		**1,507.570 5**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.5 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6246	0.3789	4.5278	0.0151	1.7437	0.0131	1.7568	0.4624	0.0120	0.4745		1,506.6539	1,506.6539	0.0367		1,507.5705
Total	**0.6246**	**0.3789**	**4.5278**	**0.0151**	**1.7437**	**0.0131**	**1.7568**	**0.4624**	**0.0120**	**0.4745**		**1,506.6539**	**1,506.6539**	**0.0367**		**1,507.5705**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**8.8386**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.5 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5949	0.3466	4.2012	0.0145	1.7437	0.0128	1.7565	0.4624	0.0118	0.4742		1,448.330 3	1,448.330 3	0.0334		1,449.165 7
Total	**0.5949**	**0.3466**	**4.2012**	**0.0145**	**1.7437**	**0.0128**	**1.7565**	**0.4624**	**0.0118**	**0.4742**		**1,448.330 3**	**1,448.330 3**	**0.0334**		**1,449.165 7**

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	8.6677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**8.7272**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.5 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5949	0.3466	4.2012	0.0145	1.7437	0.0128	1.7565	0.4624	0.0118	0.4742		1,448.330 3	1,448.330 3	0.0334		1,449.165 7
Total	**0.5949**	**0.3466**	**4.2012**	**0.0145**	**1.7437**	**0.0128**	**1.7565**	**0.4624**	**0.0118**	**0.4742**		**1,448.330 3**	**1,448.330 3**	**0.0334**		**1,449.165 7**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9410**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.745 2**	**2,206.745 2**	**0.7137**		**2,224.587 8**

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0333	0.4040	1.4000e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1300e-003	0.0456		139.2625	139.2625	3.2100e-003		139.3429
Total	**0.0572**	**0.0333**	**0.4040**	**1.4000e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1300e-003**	**0.0456**		**139.2625**	**139.2625**	**3.2100e-003**		**139.3429**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5609	11.2952	17.2957	0.0228		0.6093	0.6093		0.6093	0.6093	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0258					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5867**	**11.2952**	**17.2957**	**0.0228**		**0.6093**	**0.6093**		**0.6093**	**0.6093**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0572	0.0333	0.4040	1.4000e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1300e-003	0.0456		139.2625	139.2625	3.2100e-003		139.3429
Total	**0.0572**	**0.0333**	**0.4040**	**1.4000e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1300e-003**	**0.0456**		**139.2625**	**139.2625**	**3.2100e-003**		**139.3429**

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	8.3191	38.5090	102.8760	0.4252	40.3599	0.3271	40.6869	10.7979	0.3037	11.1015		43,444.32 71	43,444.32 71	2.0341		43,495.17 87
Unmitigated	8.3191	38.5090	102.8760	0.4252	40.3599	0.3271	40.6869	10.7979	0.3037	11.1015		43,444.32 71	43,444.32 71	2.0341		43,495.17 87

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,779.05	3,661.47	3357.78	10,209,718	10,209,718
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	165.58	285.07	237.31	262,888	262,888
Hotel	2,284.08	2,514.33	1826.65	5,372,764	5,372,764
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Strip Mall	33.13	44.98	21.86	63,188	63,188
Total	5,261.84	6,505.85	5,443.60	15,908,557	15,908,557

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
City Park	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Enclosed Parking with Elevator	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
High Turnover (Sit Down Restaurant)	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Hotel	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Other Asphalt Surfaces	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Recreational Swimming Pool	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Strip Mall	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.311 2	3,803.311 2	0.0729	0.0697	3,825.912 4
NaturalGas Unmitigated	0.3486	3.0681	1.9189	0.0190		0.2409	0.2409		0.2409	0.2409		3,803.311 2	3,803.311 2	0.0729	0.0697	3,825.912 4

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					
Apartments Mid Rise	17234.2	0.1859	1.5883	0.6759	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.5575	2,027.5575	0.0389	0.0372	2,039.6063
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	1137.99	0.0123	0.1116	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003		133.8817	133.8817	2.5700e-003	2.4500e-003	134.6773
Hotel	13951.1	0.1505	1.3678	1.1489	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.3064	1,641.3064	0.0315	0.0301	1,651.0598
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
Recreational Swimming Pool	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
Strip Mall	4.80767	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5656	0.5656	1.0000e-005	1.0000e-005	0.5690
Total		**0.3486**	**3.0681**	**1.9189**	**0.0190**		**0.2409**	**0.2409**		**0.2409**	**0.2409**		**3,803.3112**	**3,803.3112**	**0.0729**	**0.0697**	**3,825.9124**

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					
Apartments Mid Rise	17.2342	0.1859	1.5883	0.6759	0.0101		0.1284	0.1284		0.1284	0.1284		2,027.5575	2,027.5575	0.0389	0.0372	2,039.6063
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed 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
High Turnover (Sit Down Restaurant)	1.13799	0.0123	0.1116	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003		133.8817	133.8817	2.5700e-003	2.4500e-003	134.6773
Hotel	13.9511	0.1505	1.3678	1.1489	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.3064	1,641.3064	0.0315	0.0301	1,651.0598
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
Recreational Swimming Pool	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
Strip Mall	0.00480767	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5656	0.5656	1.0000e-005	1.0000e-005	0.5690
Total		**0.3486**	**3.0681**	**1.9189**	**0.0190**		**0.2409**	**0.2409**		**0.2409**	**0.2409**		**3,803.3112**	**3,803.3112**	**0.0729**	**0.0697**	**3,825.9124**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955
Unmitigated	20.4149	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627	0.0000	85.5310	85.5310	0.0826	0.0000	87.5955

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	1.7027					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.2766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4356	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627		85.5310	85.5310	0.0826		87.5955
Total	**20.4149**	**0.5458**	**47.4195**	**2.5100e-003**		**0.2627**	**0.2627**		**0.2627**	**0.2627**	**0.0000**	**85.5310**	**85.5310**	**0.0826**	**0.0000**	**87.5955**

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	1.7027					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.2766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4356	0.5458	47.4195	2.5100e-003		0.2627	0.2627		0.2627	0.2627		85.5310	85.5310	0.0826		87.5955
Total	**20.4149**	**0.5458**	**47.4195**	**2.5100e-003**		**0.2627**	**0.2627**		**0.2627**	**0.2627**	**0.0000**	**85.5310**	**85.5310**	**0.0826**	**0.0000**	**87.5955**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Terra Mixed Use Project - Building 1 Operation

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	252.00	Dwelling Unit	7.45	279,162.00	721

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	1096.12	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per PD for Building 1

Construction Phase - Construction not calculated in this model run.

Trips and VMT - Construction not calculated in this model run.

Grading - Construction not calculated in this model run.

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - construction not included in this model run

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Off-road Equipment - Construction not calculated in this model run.

Demolition - Construction not calculated in this model run.

On-road Fugitive Dust - Construction not calculated in this model run.

Architectural Coating - Construction not calculated in this model run.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	214.20	0.00
tblFireplaces	NumberNoFireplace	25.20	0.00
tblFireplaces	NumberWood	12.60	0.00
tblLandUse	LandUseSquareFeet	252,000.00	279,162.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	6.63	7.45
tblSolidWaste	SolidWasteGenerationRate	115.92	86.94
tblTripsAndVMT	HaulingTripNumber	0.00	11,250.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	IndoorWaterUseRate	16,418,814.46	13,135,052.00
tblWoodstoves	NumberCatalytic	12.60	0.00
tblWoodstoves	NumberNoncatalytic	12.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2509	3.4022	1.8670	8.2600e-003	0.4221	0.0732	0.4953	0.1555	0.0684	0.2239						
2020	1.3927	3.2336	3.6356	0.0102	0.5184	0.1149	0.6333	0.1394	0.1080	0.2474						
Maximum	**1.3927**	**3.4022**	**3.6356**	**0.0102**	**0.5184**	**0.1149**	**0.6333**	**0.1555**	**0.1080**	**0.2474**						

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					
2019	0.2509	3.4022	1.8670	8.2600e-003	0.4221	0.0732	0.4953	0.1555	0.0684	0.2239						
2020	1.3927	3.2336	3.6356	0.0102	0.5184	0.1149	0.6333	0.1394	0.1080	0.2474						
Maximum	**1.3927**	**3.4022**	**3.6356**	**0.0102**	**0.5184**	**0.1149**	**0.6333**	**0.1555**	**0.1080**	**0.2474**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-2-2019**	**12-1-2019**	3.1129	3.1129
2	**12-2-2019**	**3-1-2020**	1.3469	1.3469
3	**3-2-2020**	**6-1-2020**	1.3103	1.3103
4	**6-2-2020**	**9-1-2020**	1.2715	1.2715
5	**9-2-2020**	**9-30-2020**	0.3106	0.3106
		Highest	3.1129	3.1129

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	1.2271	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						
Energy	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						
Mobile	0.4091	2.1547	5.6465	0.0206	1.7042	0.0172	1.7214	0.4568	0.0161	0.4729						
Waste						0.0000	0.0000		0.0000	0.0000						
Water						0.0000	0.0000		0.0000	0.0000						
Total	**1.6512**	**2.3124**	**8.3224**	**0.0216**	**1.7042**	**0.0420**	**1.7462**	**0.4568**	**0.0408**	**0.4977**						

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	1.2271	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						
Energy	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						
Mobile	0.4091	2.1547	5.6465	0.0206	1.7042	0.0172	1.7214	0.4568	0.0161	0.4729						
Waste						0.0000	0.0000		0.0000	0.0000						
Water						0.0000	0.0000		0.0000	0.0000						
Total	**1.6512**	**2.3124**	**8.3224**	**0.0216**	**1.7042**	**0.0420**	**1.7462**	**0.4568**	**0.0408**	**0.4977**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	9/13/2019	5	10	
2	Grading	Grading	9/14/2019	10/11/2019	5	20	
3	Building Construction	Building Construction	10/12/2019	8/28/2020	5	230	
4	Paving	Paving	8/29/2020	9/25/2020	5	20	
5	Architectural Coating	Architectural Coating	9/26/2020	10/23/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.64

Residential Indoor: 565,303; Residential Outdoor: 188,434; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 38,556 (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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	11,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	457.00	135.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497						
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110						
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004						
Total	**4.5000e-004**	**3.8000e-004**	**4.0900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**						

3.2 Site Preparation - 2019

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497						
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110						
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004						
Total	**4.5000e-004**	**3.8000e-004**	**4.0900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**						

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337						
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129						
Total	**0.0258**	**0.2835**	**0.1629**	**3.0000e-004**	**0.0655**	**0.0140**	**0.0795**	**0.0337**	**0.0129**	**0.0465**						

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	0.0534	1.7803	0.3781	4.4600e-003	0.0967	6.3700e-003	0.1030	0.0266	6.1000e-003	0.0326						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						
Total	**0.0542**	**1.7809**	**0.3849**	**4.4800e-003**	**0.0983**	**6.3800e-003**	**0.1047**	**0.0270**	**6.1100e-003**	**0.0331**						

3.3 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337						
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129						
Total	**0.0258**	**0.2835**	**0.1629**	**3.0000e-004**	**0.0655**	**0.0140**	**0.0795**	**0.0337**	**0.0129**	**0.0465**						

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	0.0534	1.7803	0.3781	4.4600e-003	0.0967	6.3700e-003	0.1030	0.0266	6.1000e-003	0.0326						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						
Total	**0.0542**	**1.7809**	**0.3849**	**4.4800e-003**	**0.0983**	**6.3800e-003**	**0.1047**	**0.0270**	**6.1100e-003**	**0.0331**						

3.4 Building Construction - 2019

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	0.0673	0.6008	0.4892	7.7000e-004		0.0368	0.0368		0.0346	0.0346						
Total	**0.0673**	**0.6008**	**0.4892**	**7.7000e-004**		**0.0368**	**0.0368**		**0.0346**	**0.0346**						

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						
Vendor	0.0163	0.4545	0.1243	9.9000e-004	0.0242	2.8600e-003	0.0271	6.9900e-003	2.7300e-003	9.7300e-003						
Worker	0.0652	0.0544	0.5913	1.5200e-003	0.1427	1.2600e-003	0.1440	0.0379	1.1600e-003	0.0391						
Total	**0.0815**	**0.5088**	**0.7156**	**2.5100e-003**	**0.1670**	**4.1200e-003**	**0.1711**	**0.0449**	**3.8900e-003**	**0.0488**						

3.4 Building Construction - 2019

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	0.0673	0.6008	0.4892	7.7000e-004		0.0368	0.0368		0.0346	0.0346						
Total	**0.0673**	**0.6008**	**0.4892**	**7.7000e-004**		**0.0368**	**0.0368**		**0.0346**	**0.0346**						

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						
Vendor	0.0163	0.4545	0.1243	9.9000e-004	0.0242	2.8600e-003	0.0271	6.9900e-003	2.7300e-003	9.7300e-003						
Worker	0.0652	0.0544	0.5913	1.5200e-003	0.1427	1.2600e-003	0.1440	0.0379	1.1600e-003	0.0391						
Total	**0.0815**	**0.5088**	**0.7156**	**2.5100e-003**	**0.1670**	**4.1200e-003**	**0.1711**	**0.0449**	**3.8900e-003**	**0.0488**						

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1834	1.6596	1.4574	2.3300e-003		0.0966	0.0966		0.0909	0.0909						
Total	**0.1834**	**1.6596**	**1.4574**	**2.3300e-003**		**0.0966**	**0.0966**		**0.0909**	**0.0909**						

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						
Vendor	0.0424	1.2654	0.3426	3.0000e-003	0.0736	5.8900e-003	0.0794	0.0212	5.6300e-003	0.0269						
Worker	0.1825	0.1471	1.6272	4.4700e-003	0.4332	3.6900e-003	0.4369	0.1151	3.4000e-003	0.1185						
Total	**0.2248**	**1.4126**	**1.9698**	**7.4700e-003**	**0.5067**	**9.5800e-003**	**0.5163**	**0.1363**	**9.0300e-003**	**0.1453**						

3.4 Building Construction - 2020

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	0.1834	1.6596	1.4574	2.3300e-003		0.0966	0.0966		0.0909	0.0909						
Total	**0.1834**	**1.6596**	**1.4574**	**2.3300e-003**		**0.0966**	**0.0966**		**0.0909**	**0.0909**						

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						
Vendor	0.0424	1.2654	0.3426	3.0000e-003	0.0736	5.8900e-003	0.0794	0.0212	5.6300e-003	0.0269						
Worker	0.1825	0.1471	1.6272	4.4700e-003	0.4332	3.6900e-003	0.4369	0.1151	3.4000e-003	0.1185						
Total	**0.2248**	**1.4126**	**1.9698**	**7.4700e-003**	**0.5067**	**9.5800e-003**	**0.5163**	**0.1363**	**9.0300e-003**	**0.1453**						

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003						
Paving	8.4000e-004					0.0000	0.0000		0.0000	0.0000						
Total	**0.0144**	**0.1407**	**0.1465**	**2.3000e-004**		**7.5300e-003**	**7.5300e-003**		**6.9300e-003**	**6.9300e-003**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.9000e-004	5.6000e-004	6.1700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						
Total	**6.9000e-004**	**5.6000e-004**	**6.1700e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**						

3.5 Paving - 2020

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	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003						
Paving	8.4000e-004					0.0000	0.0000		0.0000	0.0000						
Total	**0.0144**	**0.1407**	**0.1465**	**2.3000e-004**		**7.5300e-003**	**7.5300e-003**		**6.9300e-003**	**6.9300e-003**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.9000e-004	5.6000e-004	6.1700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						
Total	**6.9000e-004**	**5.6000e-004**	**6.1700e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**						

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9628					0.0000	0.0000		0.0000	0.0000						
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003						
Total	**0.9652**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	4.2000e-003	3.3900e-003	0.0375	1.0000e-004	9.9700e-003	9.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003						
Total	**4.2000e-003**	**3.3900e-003**	**0.0375**	**1.0000e-004**	**9.9700e-003**	**9.0000e-005**	**0.0101**	**2.6500e-003**	**8.0000e-005**	**2.7300e-003**						

3.6 Architectural Coating - 2020

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	0.9628					0.0000	0.0000		0.0000	0.0000						
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003						
Total	**0.9652**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	4.2000e-003	3.3900e-003	0.0375	1.0000e-004	9.9700e-003	9.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003						
Total	**4.2000e-003**	**3.3900e-003**	**0.0375**	**1.0000e-004**	**9.9700e-003**	**9.0000e-005**	**0.0101**	**2.6500e-003**	**8.0000e-005**	**2.7300e-003**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4091	2.1547	5.6465	0.0206	1.7042	0.0172	1.7214	0.4568	0.0161	0.4729						
Unmitigated	0.4091	2.1547	5.6465	0.0206	1.7042	0.0172	1.7214	0.4568	0.0161	0.4729						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,222.20	1,610.28	1476.72	4,490,138	4,490,138
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,222.20	1,610.28	1,476.72	4,490,138	4,490,138

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000						
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						
NaturalGas Mitigated	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						
NaturalGas Unmitigated	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.7665e +006	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0149**	**0.1275**	**0.0543**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.7665e +006	0.0149	0.1275	0.0543	8.1000e-004		0.0103	0.0103		0.0103	0.0103						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0149**	**0.1275**	**0.0543**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**						

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	881383				
City Park	0				
Enclosed Parking with Elevator	2.79734e +006				
Other Asphalt Surfaces	0				
Recreational Swimming Pool	0				
Total					

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	769168				
City Park	0				
Enclosed Parking with Elevator	2.51761e +006				
Other Asphalt Surfaces	0				
Recreational Swimming Pool	0				
Total					

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2271	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						
Unmitigated	1.2271	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						

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	0.0963					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.0504					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0804	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						
Total	**1.2271**	**0.0302**	**2.6216**	**1.4000e-004**		**0.0145**	**0.0145**		**0.0145**	**0.0145**						

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	0.0963					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.0504					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.0804	0.0302	2.6216	1.4000e-004		0.0145	0.0145		0.0145	0.0145						
Total	**1.2271**	**0.0302**	**2.6216**	**1.4000e-004**		**0.0145**	**0.0145**		**0.0145**	**0.0145**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				
Unmitigated				

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.1351 / 10.351				
City Park	0 / 0.357444				
Enclosed Parking with Elevator	0 / 0				
Other Asphalt Surfaces	0 / 0				
Recreational Swimming Pool	0.0473145 / 0.0289992				
Total					

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.1351 / 9.71958				
City Park	0 / 0.33564				
Enclosed Parking with Elevator	0 / 0				
Other Asphalt Surfaces	0 / 0				
Recreational Swimming Pool	0.0473145 / 0.0272303				
Total					

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				
Unmitigated				

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	86.94				
City Park	0.03				
Enclosed Parking with Elevator	0				
Other Asphalt Surfaces	0				
Recreational Swimming Pool	4.56				
Total					

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	86.94				
City Park	0.03				
Enclosed Parking with Elevator	0				
Other Asphalt Surfaces	0				
Recreational Swimming Pool	4.56				
Total					

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Terra Mixed Use Project - Building 1 Operation

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	252.00	Dwelling Unit	7.45	279,162.00	721

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	1096.12	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per PD for Building 1

Construction Phase - Construction not calculated in this model run.

Trips and VMT - Construction not calculated in this model run.

Grading - Construction not calculated in this model run.

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - construction not included in this model run

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Off-road Equipment - Construction not calculated in this model run.

Demolition - Construction not calculated in this model run.

On-road Fugitive Dust - Construction not calculated in this model run.

Architectural Coating - Construction not calculated in this model run.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	214.20	0.00
tblFireplaces	NumberNoFireplace	25.20	0.00
tblFireplaces	NumberWood	12.60	0.00
tblLandUse	LandUseSquareFeet	252,000.00	279,162.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	6.63	7.45
tblSolidWaste	SolidWasteGenerationRate	115.92	86.94
tblTripsAndVMT	HaulingTripNumber	0.00	11,250.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	IndoorWaterUseRate	16,418,814.46	13,135,052.00
tblWoodstoves	NumberCatalytic	12.60	0.00
tblWoodstoves	NumberNoncatalytic	12.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	7.9412	200.6873	53.7493	0.4809	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848						
2020	96.9356	35.0425	40.6205	0.1159	5.9725	1.2273	7.1998	1.6036	1.1543	2.7579						
Maximum	**96.9356**	**200.6873**	**53.7493**	**0.4809**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**						

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					
2019	7.9412	200.6873	53.7493	0.4809	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848						
2020	96.9356	35.0425	40.6205	0.1159	5.9725	1.2273	7.1998	1.6036	1.1543	2.7579						
Maximum	**96.9356**	**200.6873**	**53.7493**	**0.4809**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Energy	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
Mobile	2.9037	13.9020	39.5464	0.1439	11.7009	0.1160	11.8169	3.1314	0.1082	3.2395						
Total	**9.9122**	**14.8420**	**60.8165**	**0.1495**	**11.7009**	**0.2880**	**11.9889**	**3.1314**	**0.2802**	**3.4116**						

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	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Energy	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
Mobile	2.9037	13.9020	39.5464	0.1439	11.7009	0.1160	11.8169	3.1314	0.1082	3.2395						
Total	**9.9122**	**14.8420**	**60.8165**	**0.1495**	**11.7009**	**0.2880**	**11.9889**	**3.1314**	**0.2802**	**3.4116**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	9/13/2019	5	10	
2	Grading	Grading	9/14/2019	10/11/2019	5	20	
3	Building Construction	Building Construction	10/12/2019	8/28/2020	5	230	
4	Paving	Paving	8/29/2020	9/25/2020	5	20	
5	Architectural Coating	Architectural Coating	9/26/2020	10/23/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.64

Residential Indoor: 565,303; Residential Outdoor: 188,434; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 38,556 (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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	11,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	457.00	135.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991						
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550						
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**						

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991						
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550						
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**						

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856						
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.5523**	**1.3974**	**7.9497**	**3.3675**	**1.2856**	**4.6531**						

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	5.2858	172.2843	36.7327	0.4494	9.8346	0.6322	10.4668	2.6958	0.6048	3.3006						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458						
Total	**5.3607**	**172.3393**	**37.4559**	**0.4513**	**10.0023**	**0.6336**	**10.6359**	**2.7403**	**0.6062**	**3.3464**						

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856						
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.5523**	**1.3974**	**7.9497**	**3.3675**	**1.2856**	**4.6531**						

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	5.2858	172.2843	36.7327	0.4494	9.8346	0.6322	10.4668	2.6958	0.6048	3.3006						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458						
Total	**5.3607**	**172.3393**	**37.4559**	**0.4513**	**10.0023**	**0.6336**	**10.6359**	**2.7403**	**0.6062**	**3.3464**						

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127						
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**						

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						
Vendor	0.5610	15.6235	4.1456	0.0353	0.8643	0.0996	0.9639	0.2488	0.0953	0.3441						
Worker	2.2830	1.6779	22.0349	0.0557	5.1082	0.0441	5.1522	1.3547	0.0406	1.3953						
Total	**2.8440**	**17.3014**	**26.1805**	**0.0910**	**5.9724**	**0.1437**	**6.1161**	**1.6035**	**0.1359**	**1.7394**						

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127						
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**						

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						
Vendor	0.5610	15.6235	4.1456	0.0353	0.8643	0.0996	0.9639	0.2488	0.0953	0.3441						
Worker	2.2830	1.6779	22.0349	0.0557	5.1082	0.0441	5.1522	1.3547	0.0406	1.3953						
Total	**2.8440**	**17.3014**	**26.1805**	**0.0910**	**5.9724**	**0.1437**	**6.1161**	**1.6035**	**0.1359**	**1.7394**						

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503						
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**						

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						
Vendor	0.4802	14.3603	3.7625	0.0350	0.8643	0.0676	0.9319	0.2488	0.0647	0.3135						
Worker	2.1031	1.4962	20.0095	0.0540	5.1082	0.0427	5.1509	1.3547	0.0393	1.3941						
Total	**2.5833**	**15.8565**	**23.7720**	**0.0890**	**5.9725**	**0.1103**	**6.0827**	**1.6036**	**0.1040**	**1.7075**						

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503						
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**						

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						
Vendor	0.4802	14.3603	3.7625	0.0350	0.8643	0.0676	0.9319	0.2488	0.0647	0.3135						
Worker	2.1031	1.4962	20.0095	0.0540	5.1082	0.0427	5.1509	1.3547	0.0393	1.3941						
Total	**2.5833**	**15.8565**	**23.7720**	**0.0890**	**5.9725**	**0.1103**	**6.0827**	**1.6036**	**0.1040**	**1.7075**						

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926						
Paving	0.0838					0.0000	0.0000		0.0000	0.0000						
Total	**1.4404**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**						

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926						
Paving	0.0838					0.0000	0.0000		0.0000	0.0000						
Total	**1.4404**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						
Total	**0.0690**	**0.0491**	**0.6568**	**1.7700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**						

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	96.2746					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109						
Total	**96.5168**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.4188	0.2979	3.9844	0.0108	1.0172	8.5000e-003	1.0257	0.2698	7.8300e-003	0.2776						
Total	**0.4188**	**0.2979**	**3.9844**	**0.0108**	**1.0172**	**8.5000e-003**	**1.0257**	**0.2698**	**7.8300e-003**	**0.2776**						

3.6 Architectural Coating - 2020

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	96.2746					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109						
Total	**96.5168**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.4188	0.2979	3.9844	0.0108	1.0172	8.5000e-003	1.0257	0.2698	7.8300e-003	0.2776						
Total	**0.4188**	**0.2979**	**3.9844**	**0.0108**	**1.0172**	**8.5000e-003**	**1.0257**	**0.2698**	**7.8300e-003**	**0.2776**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	2.9037	13.9020	39.5464	0.1439	11.7009	0.1160	11.8169	3.1314	0.1082	3.2395						
Unmitigated	2.9037	13.9020	39.5464	0.1439	11.7009	0.1160	11.8169	3.1314	0.1082	3.2395						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,222.20	1,610.28	1476.72	4,490,138	4,490,138
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,222.20	1,610.28	1,476.72	4,490,138	4,490,138

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
NaturalGas Unmitigated	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						

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					
Apartments Mid Rise	7579.46	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0817**	**0.6985**	**0.2972**	**4.4600e-003**		**0.0565**	**0.0565**		**0.0565**	**0.0565**						

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					
Apartments Mid Rise	7.57946	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0817**	**0.6985**	**0.2972**	**4.4600e-003**		**0.0565**	**0.0565**		**0.0565**	**0.0565**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Unmitigated	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						

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	0.5275					0.0000	0.0000		0.0000	0.0000						
Consumer Products	5.7557					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.6435	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Total	**6.9267**	**0.2415**	**20.9728**	**1.1100e-003**		**0.1156**	**0.1156**		**0.1156**	**0.1156**						

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	0.5275					0.0000	0.0000		0.0000	0.0000						
Consumer Products	5.7557					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.6435	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Total	**6.9267**	**0.2415**	**20.9728**	**1.1100e-003**		**0.1156**	**0.1156**		**0.1156**	**0.1156**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Terra Mixed Use Project - Building 1 Operation

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	1,537.00	Space	0.00	614,800.00	0
Other Asphalt Surfaces	27.80	1000sqft	0.64	27,800.00	0
City Park	0.30	Acre	0.00	13,068.00	0
Recreational Swimming Pool	0.80	1000sqft	0.00	800.00	0
Apartments Mid Rise	252.00	Dwelling Unit	7.45	279,162.00	721

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	1096.12	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per PD for Building 1

Construction Phase - Construction not calculated in this model run.

Trips and VMT - Construction not calculated in this model run.

Grading - Construction not calculated in this model run.

Vehicle Trips - City park and swimming pool used as proxies - Traffic study

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - SCAQMD Rule 445

Energy Use - Consistent with 2016 Title 24 requirements for lighting

Water And Wastewater - Assumed compliance with CalGreen - 20% reduction in indoor water use

Solid Waste - Assumed compliace with AB 341

Construction Off-road Equipment Mitigation - construction not included in this model run

Energy Mitigation - Per Project Description

Water Mitigation - project design features include water efficient irrigation

Fleet Mix -

Off-road Equipment - Construction not calculated in this model run.

Demolition - Construction not calculated in this model run.

On-road Fugitive Dust - Construction not calculated in this model run.

Architectural Coating - Construction not calculated in this model run.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	185.36
tblEnergyUse	LightingElect	1.75	0.44
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00

tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	214.20	0.00
tblFireplaces	NumberNoFireplace	25.20	0.00
tblFireplaces	NumberWood	12.60	0.00
tblLandUse	LandUseSquareFeet	252,000.00	279,162.00
tblLandUse	LotAcreage	13.83	0.00
tblLandUse	LotAcreage	0.30	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	6.63	7.45
tblSolidWaste	SolidWasteGenerationRate	115.92	86.94
tblTripsAndVMT	HaulingTripNumber	0.00	11,250.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	WD_TR	6.65	4.85
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	33.82	0.00
tblWater	IndoorWaterUseRate	16,418,814.46	13,135,052.00
tblWoodstoves	NumberCatalytic	12.60	0.00
tblWoodstoves	NumberNoncatalytic	12.60	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.0817	202.9921	56.1720	0.4732	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848						
2020	96.9818	35.1999	39.3244	0.1118	5.9725	1.2284	7.2009	1.6036	1.1554	2.7589						
Maximum	**96.9818**	**202.9921**	**56.1720**	**0.4732**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**						

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					
2019	8.0817	202.9921	56.1720	0.4732	18.2675	2.3921	20.6596	9.9840	2.2007	12.1848						
2020	96.9818	35.1999	39.3244	0.1118	5.9725	1.2284	7.2009	1.6036	1.1554	2.7589						
Maximum	**96.9818**	**202.9921**	**56.1720**	**0.4732**	**18.2675**	**2.3921**	**20.6596**	**9.9840**	**2.2007**	**12.1848**						

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Energy	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
Mobile	2.8182	14.2435	37.4677	0.1369	11.7009	0.1165	11.8174	3.1314	0.1087	3.2401						
Total	**9.8267**	**15.1835**	**58.7378**	**0.1425**	**11.7009**	**0.2886**	**11.9895**	**3.1314**	**0.2807**	**3.4121**						

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	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Energy	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
Mobile	2.8182	14.2435	37.4677	0.1369	11.7009	0.1165	11.8174	3.1314	0.1087	3.2401						
Total	**9.8267**	**15.1835**	**58.7378**	**0.1425**	**11.7009**	**0.2886**	**11.9895**	**3.1314**	**0.2807**	**3.4121**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	9/13/2019	5	10	
2	Grading	Grading	9/14/2019	10/11/2019	5	20	
3	Building Construction	Building Construction	10/12/2019	8/28/2020	5	230	
4	Paving	Paving	8/29/2020	9/25/2020	5	20	
5	Architectural Coating	Architectural Coating	9/26/2020	10/23/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.64

Residential Indoor: 565,303; Residential Outdoor: 188,434; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 38,556 (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
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	11,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	457.00	135.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	91.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991						
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550						
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**						

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991						
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550						
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**						

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856						
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.5523**	**1.3974**	**7.9497**	**3.3675**	**1.2856**	**4.6531**						

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	5.4182	174.5831	39.2149	0.4418	9.8346	0.6441	10.4787	2.6958	0.6162	3.3120						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458						
Total	**5.5013**	**174.6441**	**39.8786**	**0.4435**	**10.0023**	**0.6455**	**10.6478**	**2.7403**	**0.6175**	**3.3578**						

3.3 Grading - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856						
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.5523**	**1.3974**	**7.9497**	**3.3675**	**1.2856**	**4.6531**						

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	5.4182	174.5831	39.2149	0.4418	9.8346	0.6441	10.4787	2.6958	0.6162	3.3120						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458						
Total	**5.5013**	**174.6441**	**39.8786**	**0.4435**	**10.0023**	**0.6455**	**10.6478**	**2.7403**	**0.6175**	**3.3578**						

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127						
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**						

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						
Vendor	0.5851	15.6444	4.5695	0.0343	0.8643	0.1012	0.9655	0.2488	0.0969	0.3457						
Worker	2.5307	1.8581	20.2212	0.0524	5.1082	0.0441	5.1522	1.3547	0.0406	1.3953						
Total	**3.1158**	**17.5026**	**24.7906**	**0.0868**	**5.9724**	**0.1453**	**6.1177**	**1.6035**	**0.1374**	**1.7410**						

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127						
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**						

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						
Vendor	0.5851	15.6444	4.5695	0.0343	0.8643	0.1012	0.9655	0.2488	0.0969	0.3457						
Worker	2.5307	1.8581	20.2212	0.0524	5.1082	0.0441	5.1522	1.3547	0.0406	1.3953						
Total	**3.1158**	**17.5026**	**24.7906**	**0.0868**	**5.9724**	**0.1453**	**6.1177**	**1.6035**	**0.1374**	**1.7410**						

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503						
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**						

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						
Vendor	0.5020	14.3573	4.1497	0.0341	0.8643	0.0687	0.9329	0.2488	0.0657	0.3145						
Worker	2.3354	1.6565	18.3262	0.0508	5.1082	0.0427	5.1509	1.3547	0.0393	1.3941						
Total	**2.8373**	**16.0138**	**22.4759**	**0.0849**	**5.9725**	**0.1114**	**6.0838**	**1.6036**	**0.1050**	**1.7086**						

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503						
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**						

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						
Vendor	0.5020	14.3573	4.1497	0.0341	0.8643	0.0687	0.9329	0.2488	0.0657	0.3145						
Worker	2.3354	1.6565	18.3262	0.0508	5.1082	0.0427	5.1509	1.3547	0.0393	1.3941						
Total	**2.8373**	**16.0138**	**22.4759**	**0.0849**	**5.9725**	**0.1114**	**6.0838**	**1.6036**	**0.1050**	**1.7086**						

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926						
Paving	0.0838					0.0000	0.0000		0.0000	0.0000						
Total	**1.4404**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**						

3.5 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926						
Paving	0.0838					0.0000	0.0000		0.0000	0.0000						
Total	**1.4404**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						
Total	**0.0767**	**0.0544**	**0.6015**	**1.6700e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**						

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	96.2746					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109						
Total	**96.5168**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.4650	0.3299	3.6492	0.0101	1.0172	8.5000e-003	1.0257	0.2698	7.8300e-003	0.2776						
Total	**0.4650**	**0.3299**	**3.6492**	**0.0101**	**1.0172**	**8.5000e-003**	**1.0257**	**0.2698**	**7.8300e-003**	**0.2776**						

3.6 Architectural Coating - 2020

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	96.2746					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109						
Total	**96.5168**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**						

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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.4650	0.3299	3.6492	0.0101	1.0172	8.5000e-003	1.0257	0.2698	7.8300e-003	0.2776						
Total	**0.4650**	**0.3299**	**3.6492**	**0.0101**	**1.0172**	**8.5000e-003**	**1.0257**	**0.2698**	**7.8300e-003**	**0.2776**						

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	2.8182	14.2435	37.4677	0.1369	11.7009	0.1165	11.8174	3.1314	0.1087	3.2401						
Unmitigated	2.8182	14.2435	37.4677	0.1369	11.7009	0.1165	11.8174	3.1314	0.1087	3.2401						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,222.20	1,610.28	1476.72	4,490,138	4,490,138
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Total	1,222.20	1,610.28	1,476.72	4,490,138	4,490,138

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Recreational Swimming Pool	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
NaturalGas Unmitigated	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						

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					
Apartments Mid Rise	7579.46	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0817**	**0.6985**	**0.2972**	**4.4600e-003**		**0.0565**	**0.0565**		**0.0565**	**0.0565**						

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					
Apartments Mid Rise	7.57946	0.0817	0.6985	0.2972	4.4600e-003		0.0565	0.0565		0.0565	0.0565						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.0817**	**0.6985**	**0.2972**	**4.4600e-003**		**0.0565**	**0.0565**		**0.0565**	**0.0565**						

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Unmitigated	6.9267	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						

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	0.5275					0.0000	0.0000		0.0000	0.0000						
Consumer Products	5.7557					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.6435	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Total	**6.9267**	**0.2415**	**20.9728**	**1.1100e-003**		**0.1156**	**0.1156**		**0.1156**	**0.1156**						

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	0.5275					0.0000	0.0000		0.0000	0.0000						
Consumer Products	5.7557					0.0000	0.0000		0.0000	0.0000						
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Landscaping	0.6435	0.2415	20.9728	1.1100e-003		0.1156	0.1156		0.1156	0.1156						
Total	**6.9267**	**0.2415**	**20.9728**	**1.1100e-003**		**0.1156**	**0.1156**		**0.1156**	**0.1156**						

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

MM AQ-2 Calculation

2020 NOx from hauling

Grading Days		87	
one way trips/day		182.48	
VMT/day		11916	
	15,876	one way trip	
	7938	roundtrips	
	170	mi to Kettleman City landfill	
	30	mi to Simi Valley landfill	
	65.3	mi (weighted average for one way trip, based on 25.2% of trips going to Kettleman City and 74.8% of trips going to Simi Valley)	

Hauling Emissions with MM AQ-1

	g/mi NOX RUNEX***	g/trip NOx_IDLEX*	g/trip NOx_STREX**	
Emission factor (2010-2018)	2.00	12.81	19.44	
Emissions per day	23797.72	2337.83	3548.14	
		Total:	29683.68	g/day
			65.44	lb/day of NOX

*NOX IDLEX is from CalEEMod default
**NOX STREX Is recalced based on CalEEMod User Guide App A for 2010 to 2018
***NOX RUNEX is updated from EMFAC for model years 2010 - 2018

Total 2019 NOX Emissions with MM AQ-2

Mitigated Construction Onsite	All Sources	14.84
Mitigated Construction Offsite	Vendor	0.00
	Worker	0.06
	Subtotal non hauling	*14.90*
	New Hauling Emissions	65.44
	Total	**80.34**

Operational GHG Emission Mobile Calculations

La Terra Mixed Use Project

Vehicle Population Breakdown*	
6804935	Gasoline vehicles
162770	Diesel vehicles
97.7%	Gasoline vehicle %
2.3%	Diesel vehicle %

VMT per Vehicle Type	
15,908,557	Project VMT (CalEEMod output)
15536923	Gasoline vehicle VMT
371634	Diesel vehicle VMT

Gasoline Vehicles	
97.7%	Gasoline vehicle %
5.9777	Tons per year mobile NOX emissions (annual output in CalEEMod)
5.84	Gasoline vehicle tons per year NOX emissions
4.16%	Percentage to convert NOX emissions to N2O **
0.2429	Tons per year N2O emissions for gasoline vehicles
0.2203	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
0.3316	grams N2O per gallon of fuel for diesel vehicles**
26.81	Diesel average miles per gallon*
0.01237	grams per mile N2O for diesel vehicles
4596.7	grams per year N2O for diesel vehicles
0.0045967	Metric tons per year N2O emissions for diesel vehicles

CO2E Emissions from N2O	
0.2249	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
67.0	**CO2E emissions per year from N2O emissions from gasoline + diesel vehicles**
79.7%	**Passenger and Light Duty Vehicle Percent of Fleet Mix (output in CalEEMod)**
53.4	**CO2E emissions per year from N2O emissions from Passenger and Light Duty**

Total Emissions from Passenger and Light Duty	
6104.1	Metric tons CO2e per year from all mobile sources (CalEEMod output)
79.7%	**Passenger and Light Duty Vehicle Percent of Fleet Mix (output in CalEEMod)**
4865.0	**Metric tons CO2e per year from Passenger and Light Duty**
53.4	**MT CO2E emissions per year from N2O emissions from Passenger and Light Duty**
4918.4	**Total MT CO2e emissions per year from Passenger and Lighty Duty vehicles**
29707.4	**Total lbs CO2e per day from Passenger and Light Duty Vehicles**
2085	**Service Population**
14.2	**lbs CO2E per service person per day**

Sources
***Vehicle population source:**
EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Season: Annual
Vehicle Classification: EMFAC2011 Categories
****Methodology source:**
EMFAC2011 Frequently Asked Questions
https://www.arb.ca.gov/msei/emfac2011-faq.htm
*****GWP source:**
Intergovernmental Panel on Climate Change (IPCC). 2007.
AR4 Climate Change 2007: The Physical Science Basis.
Contrbution of Working Group I to the Fourth Assessment Report of the
Intergovernmental Panel on Climate Change.