IV. Environmental Impact Analysis

A. Air Quality

1. Introduction

This section examines the degree to which the Project may result in significant adverse impacts to air quality. Both short-term construction emissions occurring from activities, such as grading and haul truck trips, as well as long-term effects related to the ongoing operation of the Project are discussed in this section. The analysis focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. "Emissions" refer to the actual quantity of pollutant measured in pounds per day (ppd). "Concentrations" refer to the amount of pollutant material per volumetric unit of air and are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

The potential for the Project to conflict with or obstruct implementation of the applicable air quality plan, to violate an air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment, or to expose sensitive receptors to substantial pollutant concentrations are also discussed. Air quality data utilized in the preparation of this section is included as **Appendix B** of this Draft EIR.

2. Environmental Setting

a) Air Quality Background

The Project Site is located within the South Coast Air Basin (Basin), named so because its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys below. The Basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The regional climate within the Basin is considered to be semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources – such as dense population centers, heavy vehicular traffic, and industry – and weather.

Air pollutant emissions within the Basin are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at an identified location and are usually associated with

manufacturing and industry. Examples of point sources are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbeque lighter fluid and hair spray. Mobile sources are emissions from motor vehicles, 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, race cars, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health and welfare. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, that have been adopted for them. The Federal and State standards have been set at levels considered safe to protect public health, including the health of "sensitive" populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

b) Air Pollutants and Potential Health Effects

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality within the Air Basin. The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC)/reactive organic gases (ROG), and lead (Pb). In addition, toxic air contaminants (TACs) are a concern in the Basin. The characteristics of each of these pollutants are briefly described below.

The health effects of criteria pollutants (i.e., O_3, CO, PM_{10} and $PM_{2.5}$, NO_2, SO_2, and Pb) and TACs are described below. In addition, a list of the harmful effects of each criteria pollutant is provided in **Table IV.A-1, Summary of Health Effects of Criteria Pollutants**.

Table IV.A-1
Summary of Health Effects of Criteria Pollutants

Pollutants	Primary Health and Welfare Effects
Ozone (O_3)	• Aggravation of respiratory and cardiovascular diseases • Reduced lung function • Increased cough and chest discomfort
Carbon Monoxide (CO)	• Aggravation of some heart disease (angina) • Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure
Nitrogen Dioxide (NO_2)	• Aggravation of respiratory illness
Respirable and Fine Particulate Matter (PM_{10} and $PM_{2.5}$)	• Reduced lung function • Aggravation of respiratory and cardio-respiratory diseases • Increases in mortality rate • Reduced lung function growth in children
Sulfur Dioxide (SO_2)	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function
Lead (Pb)	• Behavioral and hearing disabilities in children • Nervous system impairment
Source: South Coast Air Quality Management District, Guidance Document for Air Quality Issues in General Plans and Local Planning, Appendix C, 2005.	

(1) Criteria Pollutants

(a) Ozone (O_3)

Ozone is a highly reactive and unstable gas that is formed when reactive organic gases (ROGs), sometimes referred to as volatile organic compounds (VOC), and nitrogen oxides (NO_x), byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. Individuals exercising outdoors, children and people with preexisting lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible sub-groups for ozone effects. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has

also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities.

Ozone exposure under exercising conditions is known to increase the severity of the observed responses mentioned above. Animal studies suggest that exposures to a combination of pollutants that include ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

(b) Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O_3, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart.

Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Reduction in birth weight and impaired neurobehavioral development has been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels. These include pre-term births and heart abnormalities. Additional research is needed to confirm these results.

(c) Nitrogen Dioxide (NO_2)

Nitrogen dioxide is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered),

as well as point sources, especially power plants. Of the seven types of NO_x compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of O3 and NO2.

(d) Particulate Matter (PM_{10} and $PM_{2.5}$)

Respirable and fine particulate matter PM_{10} and $PM_{2.5}$ consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

A consistent correlation between elevated ambient respirable and fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease and children appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

(e) Sulfur Dioxide (SO_2)

Sulfur dioxide is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_x).

A few minutes exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

(f) Lead (Pb)

Lead occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so the majority of such combustion emissions are associated with off-road vehicles, such as racecars. However, because leaded gasoline was emitted in large amounts from vehicles when leaded gasoline was used for on-road motor vehicles, lead is present in many urban soils and can be re-suspended in the air. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and the use of secondary lead smelters.

Lead is also found in lead-based paint, which is considered to be a health hazard for people, especially children. From the turn of the century through the 1940s, paint manufacturers used lead as a primary ingredient in many oil-based paints. Use of lead in paint decreased but was still used until 1978, when it was banned from residential use.

Remodeling, renovations, or demolition activities in older buildings could disturb lead-based paint surfaces.

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence levels. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures and death. It appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early-age environmental exposure, and elevated blood lead levels can occur due to the breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

(g) Sulfates (SO_2 and SO_4)

Most of the health effects associated with fine particles and SO_2 at ambient levels are also associated with SO_4. Thus, both mortality and morbidity effects have been observed with an increase in ambient SO_4 concentrations. However, efforts to separate the effects of SO_4 from the effects of other pollutants have generally not been successful.

Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure. Animal studies suggest that acidic particles, such as sulfuric acid aerosol and ammonium bisulfate, are more toxic than non-acidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

(2) Volatile Organic Compounds (VOCs)

Volatile Organic Compounds are organic compounds that can evaporate into an organic gas. VOCs can either be reactive or non-reactive. VOC emissions often result from the evaporation of solvents in architectural coatings. Reactive Organic Gases are organic gases that undergo a photochemical reaction, thus are reactive. ROG emissions are generated from the exhaust of mobile sources. Both VOC and ROGs are precursors to ozone and the terms can be used interchangeably.

(3) Toxic Air Contaminants (TACs)

Toxic Air Contaminants refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. TACs include both organic and inorganic chemical

substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than "criteria" pollutants in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxics and their effects on health tend to be felt on a local scale rather than on a regional basis.

TACs are a broad class of compounds known to cause or contribute to cancer or non-cancer health effects such as birth defects, genetic damage, and other adverse health effects. As discussed previously, effects from TACs may be both chronic and acute on human health. Acute health effects are attributable to sudden exposure to high quantities of air toxics. These effects include nausea, skin irritation, respiratory illness, and, in some cases, death. Chronic health effects result from low-dose, long-term exposure from routine releases of air toxics. The effect of major concern for this type of exposure is cancer, which requires a period of 10 to 30 years after exposure to develop.

TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and Federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

c) Regulatory Framework

Air quality in the United States is governed by the Federal Clean Air Act (CAA). In addition to being subject to the requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). At the Federal level, the CAA is administered by the United States Environmental Protection Agency (U.S. EPA). In California, the CCAA is administered by CARB at the State level and by the Air Quality Management Districts at the regional and local levels.

Air quality within the Basin is addressed through the efforts of various Federal, State, regional, and local government agencies. These agencies work jointly, as well as

individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Basin are discussed below.

(1) Federal

(a) U.S. Environmental Protection Agency

The U.S. EPA is responsible for setting and enforcing the Federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the Federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also has jurisdiction over emissions sources outside State waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the Federal standards. The SIP must integrate Federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

(2) State

(a) California Clean Air Act

The CCAA requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. The CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both Federal and State air pollution control programs within California. In this capacity, the CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan. The CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

(3) Regional

(a) Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. It

is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) identifies growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the South Coast Air Quality Management District.

On September 3, 2020, SCAG approved and adopted the Connect SoCal 2020–2045 RTP/SCS. The RTP/SCS is currently pending certification by the California Air Resources Board (CARB). Similar to the 2016-2040 RTP/SCS, the newly adopted 2020-2045 RTP/SCS encompasses and builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The plan lays out a strategy for the region to meet CARB greenhouse gas reduction targets at eight percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. In addition, the plan anticipates a 25.7 percent decrease in time spent in traffic delay per capita and a five percent decrease in daily miles driven per capita from 2016 to 2045.

(b) Air Quality Management Plan

The South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, SCAQMD, a regional agency, works directly with SCAG, county transportation commissions, and local governments, and cooperates actively with all State and Federal government agencies. SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources to meet Federal and State ambient air quality standards. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs). The most recent of these was adopted by the Governing Board of the SCAQMD on March 3, 2017. This AQMP, referred to as the 2016 AQMP, was prepared to comply with the Federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high levels of pollutants in the Basin, to meet Federal and State air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The 2016 AQMP identifies the control measures that will be implemented over a 20-year horizon to reduce major sources of pollutants. Implementation of control

measures established in the previous AQMPs has substantially decreased the population's exposure to unhealthful levels of pollutants, even while substantial population growth has occurred within the Basin.

The future air quality levels projected in the 2016 AQMP are based on several assumptions. For example, the SCAQMD assumes that general new development within the Basin will occur in accordance with population growth and transportation projections identified by SCAG in the 2016-2040 RTP/SCS. The 2016 AQMP also assumes that general development projects will include strategies to reduce emissions generated during construction and operation in accordance with SCAQMD and local jurisdiction regulations which are designed to address air quality impacts and pollution control measures.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within its jurisdiction. Instead, SCAQMD has used its expertise and prepared the CEQA Air Quality Handbook and newer thresholds of significance to indirectly address these issues in accordance with the projections and programs of the AQMPs. The purpose of the CEQA Air Quality Handbook and newer thresholds of significance is to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the Basin.

Specifically, the CEQA Air Quality Handbook and newer thresholds of significance explain the procedures that the SCAQMD recommends be followed during environmental review processes required by CEQA. The CEQA Air Quality Handbook and newer thresholds of significance provide direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the region, and adverse impacts will be minimized.

(4) Local

(a) City of Los Angeles

Local jurisdictions, such as the City of Los Angeles, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals.

(i) Air Quality Element of the General Plan

The *Air Quality Element of the City of Los Angeles General Plan* (Air Quality Element) was adopted on November 24, 1992, and sets forth the goals, objectives and policies that guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges that numerous efforts are underway at the regional, county and city levels addressing clean air concerns and that coordination of these various efforts and the involvement of the area's residents are crucial to the achievement of State and Federal air quality standards.

The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and clean air goals. Mutually reinforcing strategies need to be developed which work to reduce the use of single occupant vehicles and vehicle trips and vehicle miles traveled.

The Air Quality Element establishes six goals:

1. Good air quality in an environment of continued population growth and healthy economic structure;

2. Less reliance on single-occupant vehicles with fewer commute and non-work trips;

3. Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;

4. Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;

5. Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting; and

6. Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD *CEQA Air Quality Handbook* as the guidance document for the environmental review of plans and development proposals within its jurisdiction. The City does not, however, have the

specific technical expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the county and region will meet Federal and State standards. Instead, the City relies upon the expertise of the SCAQMD, uses the *CEQA Air Quality Handbook*, and SCAQMD-recommended thresholds of significance as the guidance for the environmental review of plans and development proposals.

d) Existing Conditions

(1) Regional Air Quality

Ambient air quality is determined primarily by the type and amount of pollutants emitted into the atmosphere, as well as the size, topography, and meteorological conditions of a geographic area. The Basin has low mixing heights and light winds, which help to accumulate air pollutants. Exhaust emissions from mobile sources generate the majority of ROG, CO, NO_x, and SO_x both in the Basin generally and specifically the Los Angeles County portion of the Basin. Area-wide sources generate the most airborne particulates (i.e., PM_{10} and $PM_{2.5}$) in both the Basin and Los Angeles County. Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the CARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

The U.S. EPA and the CARB use different standards for determining whether the Basin is in attainment. Federal and State standards are summarized in **Table IV.A-2, Ambient Air Quality Standards**. The attainment status for the Los Angeles County portion of the Basin with regard to the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) are shown in **Table IV.A-3, Attainment Status for the South Coast Air Basin (Los Angeles County Portion)**.

Table IV.A-2
Ambient Air Quality Standards

Air Pollutant	Averaging Time	State Standard	Federal Standard
Ozone (O_3)	1 Hour	0.09 ppm	--
	8 Hour	0.07 ppm	0.07 ppm
Carbon Monoxide (CO)	1 Hour	20.0 ppm	35.0 ppm
	8 Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 Hour	180 ppb	100 ppb
	Annual	30 ppb	53 ppb

Table IV.A-2
Ambient Air Quality Standards

Air Pollutant	Averaging Time	State Standard	Federal Standard
Sulfur Dioxide (SO_2)	1 Hour	250 ppb	75 ppb
	24 Hour	40 ppb	--
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3
	Annual	20 µg/m^3	--
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Lead	30 Day Average	1.5 µg/m^3	--
	Rolling 3-Month Average	--	0.15 µg/m^3
Sulfates	24 Hour	25 µg/m^3	--

Notes:
ppm = parts per million
ppb = parts per billion
µg/m^3 = microgram per cubic meter
Source: South Coast Air Quality Management District, Air Quality Management Plan Appendix II.

Table IV.A-3
Attainment Status for the South Coast Air Basin (Los Angeles County Portion)

Pollutant	Attainment Status	
	NAAQS	CAAQS
Ozone (1-Hour)	Non-Attainment (Extreme)	Non-Attainment
Ozone (8-Hour)	Non-Attainment (Extreme)	Non-Attainment
Carbon Monoxide (1- & 8-hour)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (1-Hour)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (Annual)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (1-Hour)	Unclassified/Attainment	Attainment
Sulfur Dioxide (24-Hour & Annual)	Unclassified/Attainment	Attainment
PM_{10} (24-Hour)	Attainment (Maintenance)	Non-Attainment
PM_{10} (Annual)	N/A	Non-Attainment
$PM_{2.5}$ (24-Hour)	Non-Attainment (Moderate)	N/A
$PM_{2.5}$ (Annual)	Non-Attainment (Moderate)	Non-Attainment
Lead	Non-Attainment (Partial)	Attainment

Source: EPA Nonattainment Areas for Criteria Pollutants (Green Book); CARB Maps of State and Federal Area Designations.

The SCAQMD divides the Basin into 38 source receptor areas (SRAs), wherein 38 monitoring stations operate to monitor the various concentrations of air pollutants in the region. The Project Site is located within SRA 1 covering Central Los Angeles. The monitoring station located at 1630 N Main St, Los Angeles is the station closest to the site

that collects data within SRA 1. This station monitors emission levels of O_3, CO, NO_2, SO_2, Sulfates, lead, PM_{10}, and $PM_{2.5}$. **Table IV.A-4, Summary of Ambient Air Quality in the Project Vicinity,** identifies the Federal and State ambient air quality standards for the relevant air pollutants, along with the ambient pollutant concentrations that were measured in SRA 1 between 2016 and 2018.[1]

According to the air quality data shown in **Table IV.A-4**, the State 1-hour ozone standard was exceeded a maximum of 6 days during that time period. The national 8-hour ozone standard was exceeded on fourteen days from 2016 to 2018 and the State 8-hour ozone standard was exceeded a maximum of sixteen days during that time period. The national 24-hour PM_{10} standard was not exceeded from 2016 to 2018 and the State 24-hour PM_{10} standard was exceeded 40 days during that time period. For $PM_{2.5}$, the national 24-hour standard was exceeded 6 days from 2016 to 2018. No national or State standards for CO, NO_2, SO_2, sulfates, or lead were exceeded from 2016 to 2018.

Table IV.A-4
Summary of Ambient Air Quality in the Project Vicinity

Air Pollutants Monitored Within SRA 1 (Central Los Angeles Area)	Year		
	2016	2017	2018
Ozone (O_3)			
Maximum 1-hour concentration measured	0.103 ppm	0.116 ppm	0.098 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	2	6	2
Maximum 8-hour concentration measured	0.078 ppm	0.086 ppm	0.074 ppm
Number of days exceeding national 0.07 ppm 8-hour standard	4	14	4
Number of days exceeding State 0.07 ppm 8-hour standard	4	16	4
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration measured	74.6 µg/m^3	96.2 µg/m^3	81.2 µg/m^3
Number of days exceeding national 150 µg/m^3 24-hour standard	0	0	0
Number of days exceeding State 50 µg/m^3 24-hour standard	21	40	31
Annual Arithmetic Mean (AAM)	25.8 µg/m^3	25.7 µg/m^3	30.2 µg/m^3
Does measured AAM exceed national 150 µg/m^3 AAM standard?	No	No	No
Does measured AAM exceed State 20 µg/m^3 AAM standard?	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration measured	49.4 µg/m^3	61.7 µg/m^3	65.3 µg/m^3
Number of days exceeding national 35.0 µg/m^3 24-hour standard	2	6	6
Annual Arithmetic Mean (AAM)	11.7 µg/m^3	12 µg/m^3	12.8 µg/m^3
Does measured AAM exceed national 35 µg/m^3 AAM standard?	No	No	No

[1] *Most current air quality data available.*

Table IV.A-4
Summary of Ambient Air Quality in the Project Vicinity

Air Pollutants Monitored Within SRA 1 (Central Los Angeles Area)	Year		
	2016	2017	2018
Does measured AAM exceed State 12 µg/m^3 AAM standard?	No	No	Yes
Carbon Monoxide (CO)			
Maximum 1-hour concentration measured	*	*	*
Days exceeding national 35.0 ppm 1-hour standard	0	0	0
Days exceeding State 20.0 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured		*	*
Number of days exceeding national 9.0 ppm 8-hour standard	0	0	0
Number of days exceeding State 9.0 ppm 8-hour standard	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	0.065 ppm	0.081 ppm	0.070 ppm
Number of days exceeding State 0.18 ppm 1-hour standard	0	0	0

ppm = parts by volume per million of air
ppb = parts by volume per billion of air
µg/m^3=micrograms per cubic meter
n/a = data not available or not collected by the District
**Means there was insufficient data available to determine value.*
Source: CARB website, Los Angeles-North Main Station.

(2) Existing Project Site Emissions

The Project Site is currently developed with 26,740 square feet of light industrial uses and surface parking. The average daily emissions generated by the existing building at the Project Site have been estimated utilizing CalEEMod 2016.3.2 recommended by the SCAQMD and are summarized in **Table IV.A-5, Existing Daily Operational Emissions at Project Site**.

Table IV.A-5
Existing Daily Operational Emissions at Project Site

Emissions Source	Emissions in Pounds per Day					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summertime (Smog Season) Emissions						
Area Sources	0.60	<0.01	<0.01	0.00	<0.01	<0.01
Energy Demand	0.02	0.14	0.12	<0.01	0.01	0.01
Mobile (Motor Vehicles)	0.48	2.27	7.34	0.02	1.60	0.44
Total Existing Emissions	**1.10**	**2.41**	**7.46**	**0.02**	**1.61**	**0.46**
Wintertime (Non-Smog Season) Emissions						
Area Sources	0.60	<0.01	<0.01	0.00	<0.01	<0.01
Energy Demand	0.02	0.14	0.12	<0.01	0.01	0.01

Table IV.A-5
Existing Daily Operational Emissions at Project Site

Emissions Source	Emissions in Pounds per Day					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile (Motor Vehicles)	0.47	2.35	6.92	0.02	1.60	0.44
Total Existing Emissions	**1.08**	**2.49**	**7.04**	**0.02**	**1.61**	**0.46**
*Calculation data provided in **Appendix B** to this Draft EIR. Column totals may not add due to rounding from the model results.*						

(3) Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be to be a receptor such as residence, hospital, convalescent facility where it is possible that an individual could remain for 24 hours. In addition, CARB has identified the following typical groups who are most likely to be affected by air pollution: children under 14 years of age; the elderly over 65 years of age; athletes; and people with cardiovascular and chronic respiratory diseases. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function. The nearest air quality sensitive receptors to the Project Site include the following:

- Residential uses at the Toy Factory Lofts (1855 Industrial St) and National Biscuit Company Building located to the west across Mateo Street (55 feet).
- Residential uses at the National Biscuit Company Building (1820 E. Industrial Street), located to the west across Mateo Street (55 feet);
- Residential uses at the Amp Lofts (1850 Industrial St) located to the east across Imperial Street (55 feet).
- Residential uses at the Brick Lofts (652 Mateo St) located to the north across Jesse Street (165 feet).
- Metropolitan High School (727 Wilson Street) located to the southwest at the intersection of 7th Street and Wilson Street (800 feet).

- Para Los Niños Elementary School (1617 E 7th Street) located to the west at the intersection of 7th Street and Channing Street (1,500 feet).

The Toy Story Lofts and National Biscuit Company Building are the closest sensitive receptors to the Project Site, right across the street. The other air quality sensitive land uses are located further from the Project Site (165 to 1,500 feet) and would therefore experience lower impacts.

3. Project Impacts

a) Thresholds of Significance

In accordance with the *State CEQA Guidelines* Appendix G (Appendix G), the Project would have a significant impact related to air quality if it would:

(a) Conflict with or obstruct implementation of the applicable air quality plan;

(b) Result in a cumulative considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

(c) Expose sensitive receptors to substantial pollutant concentrations; or

(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations identified in the 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions.

Construction

The L.A. CEQA Thresholds Guide (Thresholds Guide) identifies the following factors for consideration on a case-by-case basis to evaluate air quality impacts:

- Combustion Emissions from Construction Equipment
  - Type, number of pieces and usage for each type of construction equipment;
  - Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
  - Emission factors for each type of equipment.
- Fugitive Dust: Grading, Excavation and Hauling

  - Amount of soil to be disturbed on-site or moved off-site;
  - Emission factors for disturbed soil;
  - Duration of grading, excavation and hauling activities;
  - Type and number of pieces of equipment to be used; and
  - Projected haul route.

- Fugitive Dust: Heavy-Duty Equipment Travel on Unpaved Roads
  - Length and type of road;
  - Type, number of pieces, weight and usage of equipment; and
  - Type of soil.

- Other Mobile Source Emissions
  - Number and average length of construction worker trips to project site, per day; and
  - Duration of construction activities.

Operational

The Thresholds Guide identifies the following factors for consideration on a case-by-case basis to evaluate a project's operational air quality impacts:

- Operational emissions exceed 10 tons per year of volatile organic gases or any of the Operational emissions exceed 10 tons per year of volatile organic gases or any of the daily thresholds presented below (as reprinted from the SCAQMD CEQA Air Quality Handbook):
  - 55 pounds per day of VOC;[2]
  - 55 pounds per day of NO_X;
  - 550 pounds per day for CO;
  - 150 pounds per day for SO_X; and
  - 150 pounds per day for PM_{10}.

- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
  - The proposed project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively; or

[2] *The Thresholds Guide uses the term "ROG" or "reactive organic gases" interchangeably with the term "VOC." Additionally, 10 tons per year is equivalent to 55 pounds per day.*

  - The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.

- The project creates an objectionable odor at the nearest sensitive receptor.

Toxic Air Contaminants

The Thresholds Guide states that the determination of the significance of a project's impacts related toxic air contaminants shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved;
- The proximity of the toxic air contaminants to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;
- The likelihood and potential level of exposure; and
- The degree to which Project design will reduce the risk of exposure.

To further assist in determining significance under the Appendix G Thresholds, the City has determined to utilize the numeric indicators of significance, below in **Table IV.6**, **SCAQMD Air Quality Significance Thresholds**, taken from the SCAQMD's CEQA Air Quality Handbook. As stated above, the SCAQMD has stated that these indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[3]

Construction Emissions: Based on the most recently adopted indicators in the SCAQMD *CEQA Air Quality Handbook,* the Project would potentially cause or contribute to an exceedance of an air quality standard if the following would occur:

Project construction regional criteria pollutant emissions from both direct and indirect sources would exceed any of the following SCAQMD-prescribed daily emissions thresholds:[4]

- 75 pounds a day for VOC;
- 100 pounds per day for NOX;
- 550 pounds per day for CO;

[3] *South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993, page 6-2.*
[4] *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015).*

- 150 pounds per day for SO2;
- 150 pounds per day for PM_{10}; or
- 55 pounds per day for $PM_{2.5}$.

In addition, according to the SCAQMD's methodology discussed above for assessing the potential for localized construction emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits, impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NOx and/or CO during construction would be greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO_2 and/or CO.[5]
- Maximum daily localized emissions of PM_{10} and/or $PM_{2.5}$ during construction would be greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 10.4 µg/m3 over 24 hours (SCAQMD Rule 403 control requirement).[6]

As discussed previously, the SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without Project-specific dispersion modeling. This analysis uses these screening criteria to evaluate potential impacts from the Project's localized construction emissions. If the Project exceeds the screening criteria, then SCAQMD recommends that project-specific air quality dispersion modeling be performed.

Operational Emissions: The numeric indicators of significance, below, are the most recently adopted indicators in the SCAQMD *Air Quality Handbook* for determining the significance of operational emissions. The SCAQMD has established numerical indicators as significance thresholds based, in part, on Section 182(e) of the CAA, which sets 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.[7] As shown in **Table IV.B-2**, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators

[5] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*
[6] *South Coast Air Quality Management District, Air Quality Significance Thresholds.*
[7] *South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993, page 6-1.*

for other pollutants are also based on federal stationary source significance levels. SCAQMD's numeric emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have ben promulgated to protect public health.[8] Based on the indicators in the SCAQMD *CEQA Air Quality Handbook,* the Project would potentially cause or contribute to an exceedance of an air quality standard if the following would occur:

Project operational criteria pollutant emissions exceed any of the following SCAQMD prescribed daily regional numeric indicators:[9]

- 55 pounds a day for VOC;
- 55 pounds per day for NOX;
- 550 pounds per day for CO;
- 150 pounds per day for SO2;
- 150 pounds per day for PM_{10}; or
- 55 pounds per day for $PM_{2.5}$.

In addition, according to the SCAQMD's methodology discussed above for assessing the potential for a project's localized operational emissions to cause an exceedance of applicable ambient air quality standards, impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NOX and/or CO during operation would be greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO2 and/or CO.[10]
- Maximum daily localized emissions of PM_{10} and/or $PM_{2.5}$ during operation would be greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 2.5 µg/m3 over 24 hours (SCAQMD Rule 1303 allowable change in concentration).

As discussed previously, the SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized

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8 *South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993, page 6-2.*

9 *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015). The L.A. CEQA Thresholds Guide also includes a threshold of 10 tons per year of VOCs; however, this is equivalent to the SCAQMD daily threshold of 55 pounds per day.*

10 *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without Project-specific dispersion modeling. This analysis used the screening criteria to evaluate impacts from the Project's localized operational emissions.

With respect to CO hotspots, impacts would be considered significant if the following would occur:

- The Project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively within one-quarter mile of a sensitive receptor.[11]

Toxic Air Contaminants: The City has determined to evaluate the Project's impacts related to toxic air contaminants qualitatively based on the Appendix G Thresholds and applicable criteria set forth by the SCAQMD,[12] as follows:

- The Project would expose sensitive receptors to substantial concentrations of TACs if it emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of 10 in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to one in one million) or an acute or chronic hazard index of 1.0.

Consistency with Applicable Air Quality Plans: Section 15125 of the State CEQA Guidelines requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD's CEQA Air Quality Handbook, the following criteria were used to evaluate the Project's consistency with the SCAQMD's 2016 AQMP and the City's General Plan Air Quality Element:

- Criterion 1: Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Criterion 2: Will the Project exceed the assumptions utilized in preparing the AQMP?

[11] *The CAAQS are more conservative than the NAAQS (35 ppm for one-hour CO and 9.0 ppm for eight-hour CO).*

[12] *South Coast Air Quality Management District, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), (1993); SCAQMD Air Quality Significance Thresholds, (March 2015).*

The Project's potential impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's 2016 AQMP and applicable City General Plan Air Quality Element plans and policies.

Table IV.A-6
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds[a]		
Pollutant	**Construction**	**Operation**
NO_x	100 pounds/day	55 pounds/day
VOC[b]	75 pounds/day	55 pounds/day
PM_{10}	150 pounds/day	150 pounds/day
$PM_{2.5}$	55 pounds/day	55 pounds/day
SO_x	150 pounds/day	150 pounds/day
CO	550 pounds/day	550 pounds/day
Lead	3 pounds/day	3 pounds/day
Toxic Air Contaminants and Odor Thresholds		
Toxic Air Contaminants (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO2eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants [c]		
NO_2 1-hour average Annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.10 ppm (Federal)[d] 0.03 ppm (State)	
PM_{10} 24-hour average Annual average	10.4 µg/m^3 (construction)[e] & 2.5 µg/m^3 (operation) 1.0 µg/m^3	
$PM_{2.5}$ 24-hour average	10.4 µg/m^3 (construction)[e] & 2.5 µg/m^3 (operation)	
Sulfate 24-hour average	25 µg/m^3 (State)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (State) and 25 ppm (Federal) 9.0 ppm (State/Federal)	

Notes: ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter

[a] *Source: SCAQMD CEQA Handbook (SCAQMD, 1993).*

[b] *The definition of VOC includes ROG compounds and additional organic compounds not included in the definition of ROG. However, for the purposes of this evaluation, VOC and ROG will be considered synonymous.*

[c] *Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, table A-2 unless otherwise stated.*

[d] *In January 2010, the U.S. EPA proposed a new 1-hour national air quality standard of 0.10 ppm for NO_2, which is more stringent than the State's current 1-hour threshold of 0.18 ppm. For the purposes of conducting a conservative analysis, the more stringent national one-hour standard for NO_2 is used as a threshold in the evaluation of the project's air quality impacts.*

[e] *Ambient air quality threshold based on SCAQMD Rule 403.*

Source: SCAQMD CEQA Handbook (SCAQMD, 1993), SCAQMD Air Quality Significance Thresholds.

b) Methodology

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Project. Air pollutant emissions associated with the Project would result from Project operations and traffic volumes. Construction activities would also generate air pollutant emissions at the Project Site and on roadways resulting from construction traffic. The increase in Project Site emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to thresholds of significance recommended by SCAQMD.

As shown below, emissions were calculated for both the Project and the Increased Commercial Flexibility Option (Flexibility Option). Under the Flexibility Option, the commercial square footage provided would be increased from 23,380 to 45,873 square feet within the same building parameters and, in turn, there would be a reduction in the overall number of live/work units for a total of 159 units. Overall, the design, configuration, and operation of the Flexibility Option would be comparable to the Project. Both the Project and the Flexibility Option would be compliant with the Los Angeles Green Building Code and California Energy/Title 24 requirements. The Project and the Flexibility Option would include, but not be limited to, the following energy-saving compliance features that would reduce emissions:

- Ten (10) percent of the required and proposed parking spaces will have chargers for electric vehicles and thirty (30) percent of the required and provided parking spaces will be pre-plumbed for future electric vehicle charging;
- Low-water use plumbing fixtures;
- Energy-efficient elevator;
- Energy-efficient glazing and window frames;
- Energy-efficient mechanical systems and appliances;
- Energy-efficient lighting; and
- Low-water use landscaping and irrigation.

Moreover, the construction schedule would remain the same under the Flexibility Option. A detailed description of the calculations used in this analysis is provided in **Appendix B** to this Draft EIR.

(1) Construction Emissions

The regional construction emissions associated with the Project were calculated using CalEEMod 2016.3.2 recommended by SCAQMD. CalEEMod was developed in collaboration with the air districts of California as a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The input values used in this analysis were adjusted to be project-specific for the construction schedule and the equipment used was based on CalEEMod defaults. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for Los Angeles County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2014 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Daily truck trips and CalEEMod default trip length data were used to assess roadway emissions from truck exhaust. The maximum daily emissions are estimated values for the worst case day and do not represent the emissions that would occur for every day of project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators. Detailed construction equipment lists, construction scheduling, and emission calculations are available in the CalEEMod Output provided in **Appendix B** of this Draft EIR.

Construction activities associated with demolition, grading/excavation, building construction, and application of architectural coatings would generate pollutant emissions. Specifically, these construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. These construction emissions were compared to the regional thresholds established by the SCAQMD.

In addition to the SCAQMD's regional significance thresholds, the SCAQMD has established localized significance criteria in the form of ambient air quality standards for criteria pollutants. To minimize the need for detailed air quality modeling to assess localized impacts, SCAQMD developed mass-based localized significance thresholds (LSTs) that are the amount of pounds of emissions per day that can be generated by a project that would cause or contribute to adverse localized air quality impacts.

These localized thresholds, which are found in the mass rate look-up tables in the "Final Localized Significance Threshold Methodology" document prepared by SCAQMD, apply to daily construction areas that are less than or equal to five acres in size and are only applicable to the following criteria pollutants: NO_x, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standards, and are developed based on the ambient concentrations of that pollutant for each Source Receptor Area (SRA).

In terms of NO_x emissions, the two principal species of NO_x are nitric oxide (NO) and NO_2, with the vast majority (95 percent) of the NO_x emissions being comprised of NO. However, because adverse health effects are associated with NO_2, the analysis of localized air quality impacts associated with NO_x emissions is focused on NO_2 levels. NO is converted to NO_2 by several processes, the two most important of which are (1) the reaction of NO with ozone and (2) the photochemical reaction of NO with hydrocarbons. When modeling NO_2 emissions from combustion sources, SCAQMD assumes that the conversion of NO to NO_2 is complete at a distance of 5,000 meters from the source.

For PM10 LSTs, the thresholds were derived based on requirements in SCAQMD Rule 403 — Fugitive Dust. For PM2.5 LSTs, the thresholds were derived based on a general ratio of PM2.5 to PM10 for both fugitive dust and combustion emissions. As described in more detail below, the resulting on-site construction emissions generated for each construction phase were analyzed against the applicable LST for each phase.

According to SCAQMD, the LSTs for PM10 and PM2.5, which are based on a 24-hour averaging period, would be appropriate to evaluate the localized air quality impacts of a project on nearby sensitive receptors. Additionally, since nearby sensitive receptors are considered to remain close to the Project Site for 24 hours (i.e. residents adjacent to the Project Site), LSTs based on shorter averaging times, such as the one-hour NO2 or the one-hour and eight-hour CO ambient air quality standards, would also apply when evaluating localized air quality impacts on sensitive receptors.

(2) Operational Emissions

Emissions associated with Project operation were also calculated using CalEEMod 2016.3.2 and the information provided in the Traffic Study prepared for the Project attached as **Appendix L.1** of this Draft EIR. Operational emissions associated with the Project would be comprised of mobile source emissions, energy demand, and other area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Area source emissions are generated by natural gas consumption for space and water heating, landscape maintenance equipment, and consumer products. To determine if a regional

air quality impact would occur, the increase in emissions is compared with SCAQMD's recommended regional thresholds for operational emissions. The CalEEMod model analyzes operational emissions from area sources, energy usage, and mobile sources, which are discussed below.

(a) Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the Project. The vehicle trips associated with the Project have been analyzed by inputting the Project-generated vehicular trips (trip generation rate) from the Traffic Study into the CalEEMod Model. The Traffic Study found that the Project will generate approximately 2,092 total daily trips (includes reductions for internal, transit/multi-modal, and pass-by). Trip generation rates include: 5.27 trips per dwelling unit (DU) per weekday, 5.86 trips/DU for Saturdays and 4.52 trips/DU for Sundays for the apartment use (with incorporation of 10 percent trip reduction due to transit/multi-modal and 20 percent reduction for internal capture); 8.72 trips per thousand square feet (TSF) weekdays, 1.98 trips/TSF for Saturdays, and 0.63 trips/TSF for Sundays for general office (live/work) (with incorporation of 10 percent trip reduction due to transit/multi-modal and 20 percent reduction for internal capture); 64.65 trips/TSF per weekday, 70.55 trips/TSF for Saturdays and 82.22 trips/TSF for Sundays for the restaurant (with incorporation of 20 percent internal trip reduction, 20 percent pass-by reduction and 10 percent trip reduction due to transit/multi-modal); and 13.49 trips/TSF per weekday, 16.49 trips/TSF for Saturdays and 7.55 trips/TSF for Sundays for the shopping center (with incorporation of 20 percent internal trip reduction, 50 percent pass-by reduction and 10 percent trip reduction due to transit/multi-modal). The existing 26,740 TSF industrial use (to be removed from the site) generated 6.25 trips/TSF weekdays, 6.25 trips/TSF on Saturdays, and 6.25 trips/TSF on Sundays (with incorporation of a 10 percent trip reduction due to transit/multi-modal). The Saturday and Sunday trip generation rates were obtained from the 10th Edition ITE Trip Generation Manual and received the same trip reductions as the weekday rates.

The program then applies the emission factors for each trip which is provided by the EMFAC2014 model to determine the vehicular traffic pollutant emissions.

(b) Area Sources

Per the CAPCOA Appendix A Calculation Details for CalEEMod, area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping

equipment. Architectural coatings are subject to SCAQMD Rule 1113 which limits the VOC content to 50g/L for paints applied to buildings so defaults were adjusted accordingly. No other changes were made to the default area source parameters.

(c) Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters. No woodburning fireplaces/stoves will be allowed or constructed on-site.

(3) Local Operational Emissions

As discussed above, the SCAQMD has developed LSTs that are based on the amount of pounds of emissions per day that can be generated by a project that would cause or contribute to adverse localized air quality impacts. However, because the LST methodology is applicable to projects where emission sources occupy a fixed location (such as warehouse/transfer facilities), LST methodology would typically not apply to the operational phase of the Project because the Project's emissions are primarily generated by mobile sources traveling on local roadways over potentially large distances or areas. As the Project would include a mix of live-work apartments, offices, and retail/restaurant land uses, an operational analysis against the LST methodology is not applicable and, thus, has not been included in this analysis.

c) Project Design Features

See Project Design Feature (PDF) PDF TR-1 outlined in **Section IV.K., Transportation,** of this Draft EIR which would reduce air quality impacts by developing a Construction Staging and Traffic Management Plan. The Construction Staging and Traffic Management Plan would reduce impacts to sensitive receptors by ensuring haul trucks follow a specified haul route, and do not travel through residential neighborhoods. The Construction Staging and Traffic Management Plan would also include coordination with nearby projects that have potential overlapping construction timeframes. While this PDF would be beneficial, this air quality analysis does not account for quantitative reductions of air quality emissions which discloses a worst-case scenario.

d) Analysis of Project Impacts

As compared to the Project, the Flexibility Option would change the use of the second floor from residential to commercial, and would not otherwise change the Project's land uses or size. The overall commercial square footage provided would be increased from 22,493 square feet to 45,873 square feet and, in turn, there would be a reduction in the number of live/work units from 185 to 159 units. The overall building parameters would remain unchanged and the design, configuration, and operation of the Flexibility Option

would be comparable to the Project. In the analysis of Project impacts presented below, where similarity in land uses, operational characteristics and project design features between the Project and the Flexibility Option would be essentially the same, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option. For those thresholds where numerical differences exist because of the differences in project parameters between the Project and Flexibility Option, the analysis is presented separately. Further, for certain thresholds, the impacts of the Project were addressed in the Initial Study (see **Appendix A.2** of this Draft EIR) and were determined to be less than significant, with no further analysis required. However, since the Flexibility Option was not specifically addressed in the Initial Study, the analysis of the Flexibility Option is presented in this section for those thresholds.

Threshold a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

(1) Project

(a) 2016 Air Quality Management Plan

The discussion below addresses the Project's consistency with applicable SCAQMD and SCAG policies, including the SCAQMD's 2016 AQMP and growth projections within the SCAG 2016–2040 RTP/SCS.[13] In accordance with the procedures established in the SCAQMD's CEQA Air Quality Handbook, the following criteria are required to be addressed in order to determine the Project's consistency with applicable SCAQMD and SCAG policies:

- Criterion 1: Would the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

- Criterion 2: Would the project exceed the assumptions utilized in preparing the AQMP?

[13] *It should be noted that the circulation of the NOP for the Project was on February 23, 2018, which was prior to the adoption of the 2020-2045 RTP/SCS, and therefore the analysis focuses on the Project's consistency with the 2016-2040 RTP/SCS.*

- Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
- Does the Project include air quality mitigation measures; or
- To what extent is Project development consistent with the AQMP land use policies?

Both of these criteria are evaluated in the following sections.

(i) Criteria 1 - Increase in the Frequency or Severity of Violations

As shown in **Table IV.A-8**, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. As shown in **Table IV.A-9** long-term operations impacts will not result in significant impacts based on the SCAQMD regional thresholds of significance.

Therefore, as the Project meets SCAQMD thresholds, the Project is not projected to: contribute to the exceedance of any air pollutant concentration standards, cause or contribute to new air quality violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. Therefore, the Project is found to be consistent with the AQMP for the first criterion.

(ii) Criteria 2 - Exceed Assumptions in the AQMP

Consistency with the AQMP assumptions is determined by performing an analysis of the Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the Project are based on the same forecasts as the AQMP. The 2016-2040 RTP/SCS includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth.[14] These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this Project, the City of Los Angeles Land Use Element of the General Plan defines the assumptions that are represented in the AQMP.

The 2016 AQMP, discussed previously, was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact of pollution control on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment of the AQMP's goals. Therefore, projects, uses, and activities that are

[14] *It should be noted that the circulation of the NOP for the Project was on February 23, 2018, which was prior to the adoption of the 2020-2045 RTP/SCS, and therefore the analysis focuses on the Project's consistency with the 2016-2040 RTP/SCS.*

consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

As discussed in detail in **Section IV.I., Population and Housing,** of this Draft EIR, the Project would include 185 dwelling units, resulting in approximately 448 new residents. The new residents at the Project Site would account for approximately 0.6 percent of SCAG's estimated population growth in the City by 2021, and less than 0.1 percent of SCAG's estimated population growth in the City by 2040. As such, the direct Project-related population growth in the City would not be substantial and would be within SCAG's planning projections.

As shown in **Table IV.I-4** in **Section IV.I., Population and Housing,** of this Draft EIR, the Project would result in a net decrease of 2 employees. Accordingly, the Project would account for 0 percent of SCAG's estimated increase of 50,557 jobs between 2018 and 2021 and 310,128 jobs between 2018 and 2040. As such, there would be no direct Project-related increase in employment.

Based on the above, the Project will not result in an inconsistency with the SCAQMD AQMP. Therefore, while the Project would increase housing and population totals in the City, the Project's growth rates would be consistent with SCAG's anticipated growth rate. It should also be noted that the Project would comply with all SCAQMD rules and regulations that are in effect at the time of development; the Applicant is not requesting any exemptions from the currently adopted or proposed SCAQMD rules. **Thus, the Project would not conflict with the 2016 AQMP and, as such, the Project would not conflict with or obstruct implementation of applicable air quality plans, and, therefore, the Project's impact on the AQMP would be less than significant.**

(b) City of Los Angeles General Plan Air Quality Element

The Air Quality Element of the City's General Plan sets forth goals, objectives, and policies that would guide the City in the implementation of its air quality improvement programs and strategies. A detailed analysis of the consistency of the Project with relevant policies in the Air Quality Element is presented in **Table IV.A-7, Project Consistency with Applicable Policies of the General Plan Air Quality Element**.

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
Goal 1: Good air quality and mobility in an environment of continued population growth and health economic structure.	**Consistent.** The Project would be consistent with 2016-2040 RTP/SCS goals and objectives under SB 375 to implement "smart growth." The Project would provide residential uses and employment opportunities in close proximity to existing job centers in the downtown Los Angeles area where people can live/work and have access to modes of transportation that reduce reliance on automobiles and minimize associated air pollutant emissions. The Project would meet the applicable requirements of the State of California Green Building Standards Code and the City of Los Angeles Green Building Code. The Project would also reduce VMT as a result of its urban center location, with access to public transportation within a quarter-mile of the Project Site, and its proximity to job centers, retail, recreational amenities and entertainment and as such, does not exceed any SCAQMD thresholds. As a result, the Project would support objectives to achieve good air quality, mobility and a healthy economic structure.
Objective 1.1: It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan, increase traffic mobility, and sustain economic growth citywide.	**Consistent.** The Project's land use characteristics and compliance with regulatory requirements would reduce emissions associated with energy and transportation. As discussed under Threshold a), the Project would be consistent with the SCAG growth projections that are used in preparing the AQMP. The Project would occupy a location that is highly accessible by regional and local bus lines and Metro rail. As such, the Project would be supportive of the Transportation Control Measures in the AQMP related to reducing vehicle trips for employees, visitors and residents. The Project would provide residential uses within an Urban Center, which would allow people to live near work and recreational amenities.
Objective 1.3: It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites.	**Consistent.** The Project would incorporate measures that would reduce particulate air pollutants from unpaved areas, parking lots, and construction sites. The Project would

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
	implement required control measures for construction-related fugitive dust pursuant to SCAQMD Rule 403. The Project would also comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks reducing exhaust DPM emissions. Project construction would comply with the applicable provisions of the CARB In-Use Off-Road Diesel Vehicle Regulation, which aims to reduce emissions through the installation of DPM filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Project construction would also hat comply with the applicable provisions of the CARB Truck and Bus regulation to reduce PM and NO_X emissions from existing diesel trucks. The Project would also incorporate landscaped open spaces and trees.
Policy 1.3.1: Minimize particulate emissions from construction sites.	**Consistent.** Construction activities associated with the Project would be required to comply with the provisions under SCAQMD Rule 403—Fugitive Dust, which would require appropriate dust control measures to be implemented during each phase of development. Consequently, particulate emissions at the Project Site during construction of the Project would be minimized. Therefore, the Project would be consistent with this policy.
Policy 1.3.2: Minimize particulate emissions from unpaved roads and parking lots which are associated with vehicular traffic.	**Consistent.** Construction activities associated with the Project would be required to comply with the provisions under SCAQMD Rule 403—Fugitive Dust, which would require appropriate dust control measures to be implemented during each phase of development. These dust control measures include daily watering of unpaved areas and reducing vehicle speed on unpaved areas to less than 15 miles per hour. Therefore, the Project would be consistent with this policy.
Goal 2: Less reliance on single-occupant vehicles with fewer commute and non-work trips.	**Consistent.** The Project's land use characteristics (refer to the Project Description in this DEIR) would reduce trips and VMT due

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
	to its Urban Center location, with nearby access to public transportation within a quarter-mile of the Project site and location in an area with access to multiple other destinations, including job centers, and retail uses.
Objective 2.1: It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.	**Consistent.** The Project includes residential apartments, retail and restaurant uses located in close proximity to transit. The Project Site is situated at the eastern edge of downtown Los Angeles and is within a Transit Priority Area. The Project Site is served by several bus lines including Metro Local Lines 18, 53, 60, 62, and 66, and Metro Rapid Lines 720 and 760. The proximity of the Project Site to these transit stops would provide employees and residents easy access to the new development on the Project Site. Bicycle parking would be provided on the ground floor of the building and would accommodate 207 long-term and 48 short-term spaces.
Policy 2.1.1: Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling related facilities in order to reduce vehicle trips and/or VMT as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.	**Consistent.** The Project includes residential apartments, retail and restaurant uses located in close proximity to transit. The Project Site is served by several bus lines including Metro Local Lines 18, 53, 60, 62, and 66, and Metro Rapid Lines 720 and 760. The proximity of the Project Site to these transit stops would provide employees and residents easy access to the new development on the Project Site. In addition, the Project would provide on-site short-term and long-term bicycle parking spaces. In addition, the Project will have 30 percent of the required parking spaces be electric-vehicle ready and five percent of the required parking spaces would have chargers for electric vehicles within the parking structure. Therefore, the Project would be consistent with this Policy.
Objective 2.2: It is the objective of the City of Los Angeles to increase vehicle occupancy for non-work trips by creating disincentives for single-passenger vehicles, and incentives for high occupancy vehicles.	**Consistent.** The Project would meet California Green Building Standards Code and the City of Los Angeles Green Building Code standards by designating 30 percent of the required parking spaces be electric-vehicle ready and five percent of the required parking

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
	spaces would have chargers for electric vehicles within the parking structure. In addition, the Project's location would encourage nonautomotive transportation to and from the Project Site. As discussed previously, the Project would be located within a quarter-mile public transportation, including lines including Metro Local Lines 18, 53, 60, 62, and 66, and Metro Rapid Lines 720 and 760. The Project would provide bicycle parking and pedestrian pathways for building residents, employees, and visitors.
Goal 4: Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.	**Consistent.** The Project's characteristics would reduce trips and VMT due to its Urban Center location, access to public transportation within a quarter-mile of the Project Site, close proximity to multiple other destinations including job centers and retail uses, its mix of residential, retail, and restaurant uses, and is pedestrian and bicycle-friendly.
Objective 4.1: It is the objective of the City of Los Angeles to include the regional attainment of ambient air quality standards as a primary consideration in land use planning	**Consistent.** The Project analysis of potential air quality impacts relies upon the numeric indicators of significance adopted by the SCAQMD, which considers attainment of the ambient air quality standards. The Project impacts would be less than significant and would not cause or contribute to an exceedance of the ambient air quality standards.
Policy 4.1.2: Ensure that project level review and approval of land use development remain at the local level.	**Consistent.** The Project environmental review would occur at the local level. Therefore, the Project would be consistent with this Policy.
Objective 4.2: It is the objective of the City of Los Angeles to reduce vehicle trips and VMT associated with land use patterns.	**Consistent.** The Project's location and land use characteristics would reduce trips and VMT due to its urban center location, access to public transportation within a quarter-mile of the Project site, and proximity to existing employment and commercial destinations, as would its mix of residential, retail, and restaurant uses on-site, and pedestrian- and bicycle-friendly features.

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
Policy 4.2.2: Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.	**Consistent.** The Project includes the redevelopment of a site in the Central City North community and would provide a wide variety of compatible and complementary land uses. The Project Site is situated at the eastern edge of downtown Los Angeles and is within a Transit Priority Area. The Project Site is served by several bus lines including Metro Local Lines 18, 53, 60, 62, and 66, and Metro Rapid Lines 720 and 760. The proximity of the Project Site to these transit stops would provide employees and residents easy access to the new development on the Project Site. Therefore, the Project would be consistent with this policy.
Policy 4.2.3: Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.	**Consistent.** The Project proposes a mixed-use development that would include live-work apartments, office, and retail/restaurant land uses. The Project has been designed to create a pedestrian-oriented streetscape. The Project's building frontage would provide a variety of commercial uses on along Mateo Street and Imperial Street. In addition, the publicly accessible pedestrian paseo would provide connectivity between the building's frontages. The Project Site is served by several bus lines including Metro Local Lines 18, 53, 60, 62, and 66, and Metro Rapid Lines 720 and 760. The proximity of the Project Site to these transit stops would provide employees and residents easy access to the new development on the Project Site. In addition, the Project would provide on-site short-term and long-term bicycle parking spaces. The Project will have 30 percent of the required parking spaces be electric-vehicle ready and five percent of the required parking spaces would have chargers for electric vehicles within the parking structure. Therefore, the Project would be consistent with this policy.
Policy 4.2.4: Require that air quality impacts be a consideration in the review and approval of all discretionary projects.	**Consistent.** The air quality analysis conducted for the Project in this EIR serves to identify potential air quality impacts. The analysis in this EIR will be used by the City's

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
	decision makers in the review and approval process for the Project. Therefore, the Project would be consistent with this policy.
Objective 5.1: It is the objective of the City of Los Angeles to increase energy-efficiency of City facilities and private developments.	**Consistent.** As noted above, the Project would be designed and operated to meet the applicable requirements of the State of California Green Building Standards Code, and the City of Los Angeles Green Building Code.
Policy 5.1.2: Effect a reduction in energy consumption and shift to nonpolluting sources of energy in its buildings and operations.	**Consistent.** As noted above, the Project would be designed and operated to meet the applicable requirements of the State of California Green Building Standards Code, and the City of Los Angeles Green Building Code. The Project will have 30 percent of the required parking spaces be electric-vehicle ready and five percent of the required parking spaces would have chargers for electric vehicles within the parking structure. Therefore, the Project would be consistent with this Policy.
Policy 5.1.4: Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.	**Consistent.** The Project would implement a construction waste management plan to divert all mixed construction and demolition debris to City certified construction and demolition waste processors, consistent with the Los Angeles City Council approved Council File 09-3029. Municipal solid waste would be collected by haulers that comply with City and state waste diversion (specifically AB 1327 and AB 341) requirements, which may include mixed waste processing that yields diversion results comparable to source separation. Therefore, the Project would be consistent with this policy.
Objective 5.3: It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.	**Consistent.** As noted above, the Project would be designed and operated to meet the applicable requirements of the State of California Green Building Standards Code and the City of Los Angeles Green Building Code.
Policy 5.3.1: Support the development and use of equipment powered by electric or low-emitting fuels	**Consistent.** As noted above, the Project would be designed and operated to meet the applicable requirements of the State of California Green Building Standards Code,

Table IV.A-7
Project Consistency with Applicable Policies of the General Plan Air Quality Element

Policy	Consistency Analysis
	and the City of Los Angeles Green Building Code. The Project will have 30 percent of the required parking spaces be electric-vehicle ready and five percent of the required parking spaces would have chargers for electric vehicles within the parking structure. Therefore, the Project would be consistent with this objective.
Source: City of Los Angeles, General Plan Air Quality Element, adopted November 1992.	

The Project would be consistent with the goals, objectives, and policies set forth in the City's General Plan Air Quality Element, as it would be generally consistent with the applicable air quality policies discussed above. **Therefore, Project would not conflict with the 2016 AQMP or the City of Los Angeles General Plan Air Quality Element and, as such, the Project would not conflict with or obstruct implementation of applicable air quality plans, and this impact would be less than significant.**

(2) Increased Commercial Flexibility Option

Similar to the Project, the Flexibility Option would not conflict with the 2016 AQMP. As shown in **Table IV.A-10**, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. As shown in **Table IV.A-11** long-term operations impacts will not result in significant impacts based on the SCAQMD regional thresholds of significance.

Therefore, the Flexibility Option is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

As discussed in detail in **Section IV.I., Population and Housing,** of this Draft EIR, the Flexibility Option would generate approximately 385 new residents at the Project Site, which would account for approximately 0.5 percent of SCAG's estimated population growth in the City by 2021, and less than 0.1 percent of SCAG's estimated population growth in the City by 2040. As such, the direct Flexibility Option-related population growth in the City would not be substantial and would be within SCAG's planning projections.

The Flexibility Option would result in a net increase of 57 employees. Accordingly, the Flexibility Option would account for 0.1 percent of SCAG's estimated increase of 50,557 jobs between 2018 and 2021 and less than 0.1 percent of SCAG's estimated increase of 310,128 jobs between 2018 and 2040. As such, the direct Flexibility Option-related

increase in employment would not be substantial and would be within SCAG's planning projections.

Based on the above, the Flexibility Option will not result in an inconsistency with the AQMP. In addition, for the same reasons detailed for the Project, the Flexibility Option would be consistent with the goals, objectives, and policies set forth in the City's General Plan Air Quality Element, as it would be generally consistent with the applicable air quality policies discussed In **Table IV.A-7**, above. The Flexibility Option would redevelop the site with compatible and complimentary land uses, and would be well served by existing public transit. **Therefore, the Flexibility Option would not conflict with the 2016 AQMP or the City of Los Angeles General Plan Air Quality Element and, as such, would not conflict with or obstruct applicable air quality plans, and this impact would be less than significant.**

(3) Mitigation Measures

The Project and the Flexibility Option would not conflict with the 2016 AQMP or the City of Los Angeles General Plan Air Quality Element and, as such, would not conflict with or obstruct implementation of applicable air quality plans. Therefore, no mitigation measures are required.

(4) Level of Significance After Mitigation

The Project and the Flexibility Option would not conflict with the 2016 AQMP or the City of Los Angeles General Plan Air Quality Element and, as such, would not jeopardize attainment of state and national ambient air quality standards in the area under the jurisdiction of the SCAQMD and would be less than significant without mitigation.

Threshold b) Would the project result in a cumulative considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

The Air Basin is currently in non-attainment for ozone (NAAQS and CAAQS), PM_{10} (CAAQS), and $PM_{2.5}$ (NAAQS and CAAQS). The SCAQMD's *CEQA Air Quality Handbook* identifies several methods to determine the cumulative significance of land use projects (i.e., whether the contribution of a project is cumulatively considerable). However, the SCAQMD no longer recommends the use of these methodologies. Instead, the SCAQMD recommends that any construction-related emissions and operational emissions from individual development projects that exceed the project-specific mass

daily emissions thresholds also be considered cumulatively considerable.[15] Therefore, the daily construction and operational emissions of NO_x (a precursor to O_3), PM_{10}, and $PM_{2.5}$ for both the Project and the Flexibility Option have been estimated utilizing the California Emissions Estimator Model (CalEEMod 2016.3.2), as recommended by the SCAQMD and presented below. The SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions. Project-related exceedances of an applicable SCAQMD threshold(s) with regard to construction or operational emissions is considered to be cumulatively considerable.

(1) Project

(a) Construction

The Project involves the demolition of existing uses and the construction of a mixed-use development including 185 Live-Work apartments, 3,900 square feet of office space, 15,005 square feet of restaurant space, and 8,375 square feet of retail space. A minimum of 270 parking spaces would be provided in three subterranean levels. The Project would be constructed over approximately 24 months. Demolition activities are anticipated to start in 2021, and construction completion and occupancy is anticipated in 2023. Construction activities associated with the Project would be undertaken in four main steps: (1) demolition, (2) grading/excavation/foundation preparation, (3) building construction, and (4) application of architectural coatings. Demolition would occur for approximately one month and include to removal of the existing uses. Grading, excavation, and foundation preparation would occur for approximately three months and this analysis assumes 74,500 cubic yards of soil will be exported. Building construction would occur for approximately 20 months, and would include the construction of the proposed structure, connection of utilities, laying irrigation for landscaping, then installation of landscaping. Application of architectural coatings would occur for approximately 2 months and would overlap the building construction phase.

These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Construction activities involving demolition and grading would primarily generate $PM_{2.5}$ and PM_{10} emissions.

The SCAQMD has developed strategies (e.g., SCAQMD Rule 403 – Fugitive Dust) to reduce criteria pollutant emissions outlined in the AQMP pursuant to Federal CAA mandates. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes (up to three

[15] *White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions, SCAQMD Board Meeting, September 5, 2003, Agenda No. 29, Appendix D, p. D-3.*

times per day), applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (approximately 1.03 acres) a Fugitive Dust Control Plan or Large Operation Notification would not be required. The calculations of peak daily emissions assume that appropriate dust control measures would be implemented as part of the Project during each phase of development, as required by SCAQMD Rule 403 - Fugitive Dust.

The Project also will be required to comply with SCAQMD Rule 1113 as amended on June 3, 2011. Under this Rule, the VOC content of architectural coatings applied to buildings after January 1, 2014 must be limited to an average of 50 grams per liter or less.

Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the Project Site) would primarily generate NO_x emissions. The amount of emissions generated on a daily basis would vary, depending on the amount and types of construction activities occurring at the same time.

(b) Regional Air Quality Impacts from Construction

The construction-related criteria pollutant emissions for each phase are shown below in **Table IV.A-8, Construction-Related Regional Pollutant Emissions**. The maximum daily emissions are predicted values for a representative worst-case day, and do not represent the actual emissions that would occur for every day of construction, which would likely be lower on many days. Nonetheless, **Table IV.A-8, Construction-Related Regional Pollutant Emissions**, identifies daily emissions that are estimated to occur on peak construction days for each construction phase of the Project.

Table IV.A-8
Construction-Related Regional Pollutant Emissions

Activity		Pollutant Emissions (pounds/day)					
		ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Demolition	On-Site[a]	1.99	19.70	14.49	0.02	1.86	1.10
	Off-Site[b]	0.18	3.56	1.38	0.01	0.41	0.12
	Subtotal	2.17	23.26	15.88	0.04	2.27	1.22
Grading	On-Site[a]	1.31	13.43	9.85	0.02	2.50	1.61

Table IV.A-8
Construction-Related Regional Pollutant Emissions

Activity		Pollutant Emissions (pounds/day)					
		ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
	Off-Site[b]	1.73	51.18	13.38	0.16	3.99	1.21
	Subtotal	3.04	64.61	23.23	0.17	6.49	2.82
Building Construction	On-Site[a]	1.81	13.64	12.90	0.02	0.68	0.66
	Off-Site[b]	1.04	4.69	8.68	0.03	2.41	0.66
	Subtotal	2.85	18.32	21.58	0.05	3.09	1.32
Architectural Coating	On-Site[a]	27.96	1.41	1.81	0.00	0.08	0.08
	Off-Site[b]	0.17	0.11	1.29	0.00	0.43	0.12
	Subtotal	28.13	1.52	3.10	0.01	0.51	0.20
Total for overlapping phases[c]		30.98	19.84	24.68	0.06	3.60	1.52
SCAQMD Thresholds		75	100	550	150	150	55
Exceeds Thresholds?		**No**	**No**	**No**	**No**	**No**	**No**

[a] *On-site emissions from equipment operated on-site that is not operated on public roads. Demolition and On-site grading PM-10 and PM-2.5 emissions show mitigated values for fugitive dust for compliance with SCAQMD Rule 403.*
[b] *Off-site emissions from equipment operated on public roads.*
[c] *Construction and painting phases may overlap.*
*Source: CalEEMod Version 2016.3.2. Output, available in **Appendix B** of this Draft EIR.*

Table IV.A-8 shows that none of the Project 's emissions will exceed regional thresholds. **Therefore, a less than significant regional air quality impact would occur from construction of the Project. No mitigation measures are required.**

(c) Regional Air Quality Impacts from Operation

The on-going operation of the Project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the Project -generated vehicle trips and through operational emissions from the ongoing operation of the Project. The following section provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the ongoing operations of the Project.

The Project includes the operation of a mixed-use development including 185 Live-Work apartments, 3,900 square feet of office space, 15,005 square feet of restaurant space, and 8,375 square feet of retail space. A minimum of 270 parking spaces would be provided in three subterranean levels. The potential operations-related air emissions

have been analyzed below for the criteria pollutants and cumulative impacts. The worst-case summer or winter criteria pollutant emissions created from the Project's long-term operations have been calculated and are shown below in **Table IV.A-9, Regional Operational Pollutant Emissions**. The results show that none of the SCAQMD regional thresholds would be exceeded. **Therefore, a less than significant regional air quality impact would occur from operation of the Project. No mitigation measures are required.**

Table IV.A-9
Regional Operational Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area Sources[a]	5.07	2.94	16.47	0.02	0.31	0.31
Energy Usage[b]	0.16	1.46	1.01	0.01	0.11	0.11
Mobile Sources[c]	3.75	15.60	47.40	0.18	14.77	4.04
Subtotal Emissions	**8.99**	**20.00**	**64.89**	**0.20**	**15.20**	**4.46**
-Existing uses being removed	-1.10	-2.49	-7.46	-0.02	-1.61	-0.46
Total Emissions	**7.89**	**17.51**	**57.43**	**0.18**	**13.59**	**4.00**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.*
[b] *Energy usage consists of emissions from generation of electricity and on-site natural gas usage.*
[c] *Mobile sources consist of emissions from vehicles and road dust.*
Source: CalEEMod Version 2016.3.2; the higher of either summer or winter emissions, available in ***Appendix B*** *of this Draft EIR.*

As shown in **Table IV.A-9**, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the SCAQMD. According to the SCAQMD, individual projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment.

Therefore, the Project's contribution to regional emissions would not be cumulatively considerable and, thus, would be less than significant.

(2) Increased Commercial Flexibility Option

(a) Construction

Under the Flexibility Option, the commercial square footage provided would be increased to 45,873 square feet within the same building parameters and, in turn, there would be a reduction in the overall number of live/work units for a total of 159 units. The construction schedule would be similar under both scenarios, however, while the Flexibility Option would have similar construction assumptions, construction emissions may vary due to the

alternative square footages for residential and office uses. The worst-case summer or winter criteria pollutant emissions created from the construction-related criteria pollutant emissions for each phase have been calculated and are provided in **Table IV.A-10, Construction-Related Regional Pollutant Emissions Flexibility Option**.

Table IV.A-10
Construction-Related Regional Pollutant Emissions Flexibility Option

Activity		Pollutant Emissions (pounds/day)					
		ROG	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Demolition	On-Site[a]	1.99	19.70	14.49	0.02	1.86	1.10
	Off-Site[b]	0.18	3.56	1.38	0.01	0.41	0.12
	Subtotal	2.17	23.26	15.88	0.04	2.27	1.22
Grading	On-Site[a]	1.31	13.43	9.85	0.02	2.50	1.61
	Off-Site[b]	1.73	51.18	13.38	0.16	3.99	1.21
	Subtotal	3.04	64.61	23.23	0.17	6.49	2.82
Building Construction	On-Site[a]	1.81	13.64	12.90	0.02	0.68	0.66
	Off-Site[b]	0.99	4.75	8.26	0.03	2.29	0.63
	Subtotal	2.80	18.38	21.16	0.05	2.97	1.29
Architectural Coating	On-Site[a]	27.14	1.41	1.81	0.00	0.08	0.08
	Off-Site[b]	0.16	0.11	1.22	0.00	0.41	0.11
	Subtotal	27.30	1.51	3.03	0.01	0.49	0.19
Total for overlapping phases[c]		30.10	19.90	24.19	0.06	3.46	1.48
SCAQMD Thresholds		75	100	550	150	150	55
Exceeds Thresholds?		**No**	**No**	**No**	**No**	**No**	**No**

[a] *On-site emissions from equipment operated on-site that is not operated on public roads. Demolition and on-site grading PM-10 and PM-2.5 emissions show mitigated values for fugitive dust for compliance with SCAQMD Rule 403.*
[b] *Off-site emissions from equipment operated on public roads.*
[c] *Construction and painting phases may overlap.*
*Source: CalEEMod Version 2016.3.2. Output, available in **Appendix B** of this Draft EIR.*

Table IV.A-10 shows that none of the Flexibility Option's construction emissions will exceed regional thresholds. **Therefore, a less than significant regional air quality impact would occur from construction of the Flexibility Option. No mitigation measures are required.**

(b) Operation

Under the Flexibility Option, the commercial square footage provided would be increased to 45,873 square feet within the same building parameters and, in turn, there would be a reduction in the overall number of live/work units for a total of 159 units. The daily

operational emissions associated with the Flexibility Option are presented in **Table IV.A-11, Regional Operational Pollutant Emissions Flexibility Option**.

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts. The worst-case summer or winter criteria pollutant emissions created from the Increased Commercial Flexibility's long-term operations have been calculated and are shown below in **Table IV.A-11, Regional Operational Pollutant Emissions Flexibility Option**. The results show that none of the SCAQMD regional thresholds would be exceeded. **Therefore, a less than significant regional air quality impact would occur from operation of the Flexibility Option. No mitigation measures are required.**

Table IV.A-11
Regional Operational Pollutant Emissions Flexibility Option

Activity	Pollutant Emissions (pounds/day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area Sources[a]	4.95	2.53	14.16	0.02	0.26	0.26
Energy Usage[b]	0.16	1.45	1.03	0.01	0.11	0.11
Mobile Sources[c]	3.81	15.84	48.12	0.18	14.99	4.10
Subtotal Emissions	**8.92**	**19.82**	**63.31**	**0.20**	**15.37**	**4.48**
-Existing uses being removed	-1.10	-2.49	-7.46	-0.02	-1.61	-0.46
Total Emissions	**7.82**	**17.33**	**55.85**	**0.18**	**13.76**	**4.02**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.*
[b] *Energy usage consists of emissions from generation of electricity and on-site natural gas usage.*
[c] *Mobile sources consist of emissions from vehicles and road dust.*
*Source: CalEEMod Version 2016.3.2; the higher of either summer or winter emissions, available in **Appendix B** of this Draft EIR.*

As shown in **Table IV.A-11**, the operational emissions generated by the Flexibility Option would not exceed the regional thresholds of significance set by the SCAQMD. According to the SCAQMD, individual projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. **Therefore, the Flexibility Option's contribution to regional emissions would not be cumulatively considerable and, thus, would be less than significant.**

(3) Mitigation Measures

The Project and the Flexibility Option would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, no mitigation measures are required.

(4) Level of Significance After Mitigation

The Project and the Flexibility Option would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard and would be less than significant without mitigation.

Threshold c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

(1) Project

(a) Construction

(i) Localized On-Site Daily Emission Impacts

Emissions from construction activities have the potential to generate localized emissions that may expose sensitive receptors to harmful pollutant concentrations. SCAQMD has developed localized significance threshold (LST) look-up tables for project sites that are one, two, and five acres in size to simplify the evaluation of localized emissions at small sites. LSTs are provided for each Source Receptor Area (SRA) and various distances from the source of emissions. In the case of this analysis, the Project Site is located within SRA 1[16] covering the Central Los Angeles area.

LSTs represent the maximum emissions from a project that are not expected to 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. These ambient air quality standards were established at levels that provide public health protection and allow adequate margin of safety, including protecting the health of sensitive populations such as asthmatics, children, and the elderly.

Construction-related air emissions may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Basin. The Project has been analyzed for the potential local air quality impacts created from: construction-related

[16] *http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.*

fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold (LST) lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

(1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
(2) The maximum number of acres disturbed on the peak day.
(3) Any emission control devices added onto off-road equipment.
(4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The CalEEMod output in **Appendix B** of this Draft EIR show the equipment used for this analysis.

As shown in **Table IV.A-12, Maximum Number of Acres Disturbed Per Day**, the maximum number of acres disturbed in a day would be two acres during demolition. The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold (LST) Methodology prepared by SCAQMD (revised July 2008). The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ from the Project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the Central Los Angeles SRA 1.

Table IV.A-12
Maximum Number of Acres Disturbed Per Day

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Demolition	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	3	0.5	1.5
Total for phase		**-**	**-**	**2**
Grading	Rubber Tired Dozers	1	0.5	0.5
	Graders	0	0.5	0
	Tractors/Loaders/Backhoes	2	0.5	1
Total for phase		**-**	**-**	**1.5**

Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2011b.

According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. The nearest sensitive receptors to the Project Site include: the residential uses at the Toy Factory Lofts and National Biscuit Company Building to the west (55 feet), and residential uses at the Amp Lofts to the east (55 feet); therefore, the SCAQMD Look-up Tables for 25 meters were used. Additional sensitive receptors, including residential uses at the Brick Lofts to the north (165 feet); Metropolitan High School (800 feet) and Para Los Niños Elementary School (1500 feet) are located at a greater distance from the Project Site. **Table IV.A-13, Local Construction Emissions at the Nearest Receptors** shows the on-site emissions from the CalEEMod model for the different construction phases and the LST emissions thresholds.

The data provided in **Table IV.A-13**, shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. **Therefore, a less than significant local air quality impact would occur from construction of the Project. No mitigation measures are required**.

Table IV.A-13
Local Construction Emissions at the Nearest Receptors

Activity	On-Site Pollutant Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	19.70	14.49	1.86	1.10
Grading	13.43	9.85	2.50	1.61
Building Construction	13.64	12.90	0.68	0.66
Architectural Coating	1.41	1.81	0.08	0.08
SCAQMD Thresholds[a]	**108**	**1,048**	**8**	**5**
Exceeds Threshold?	**No**	**No**	**No**	**No**

[a] *The nearest sensitive receptors to the Project Site include: the residential land uses located approximately 55 feet (~16 meters) west of the site (across Mateo St) and to the east (across Imperial St); therefore, the 25 meter threshold was used.*
Note: The Project would disturb up to a maximum of 2 acres a day during demolition (see Table IV.A-12).
Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 2 acres at a distance of 25 m in SRA 1 Central Los Angeles.

(ii) Toxic Air Contaminants

With respect to TACs, the greatest potential for TAC emissions resulting from construction of the Project would involve diesel particulate emissions associated with trucks and heavy equipment. Based on SCAQMD guidance, health effects from TACs are usually described in terms of individual cancer risk, which is the likelihood that a person exposed to TACs over a 70-year lifetime will contract cancer. Project construction activity would not result in long-term substantial sources of TAC emissions (i.e., 30 or 70 years) and would not generate ongoing construction TAC emissions. Given the temporary and short-term construction schedule (approximately 24 months), the Project would not result in a long-term (i.e., lifetime or 30-year) exposure as a result of Project construction. Furthermore, as shown in **Tables IV.A-8** and **IV.A-13** above, construction-based

particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds.

In addition, the construction activities associated with the Project would be similar to other development projects in the City, and would be subject to the regulations and laws relating to toxic air pollutants at the regional, State, and Federal level that would protect sensitive receptors from substantial concentrations of these emissions. The Project would be consistent with applicable AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The Project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the demolition activities. **Thus, TAC emissions from construction of the Project would be less than significant.**

(b) Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The Project has been analyzed for the potential local CO emission impacts from the Project - generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from onsite operations per LST methodology, and odor impacts.

(i) Localized Carbon Monoxide Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with Project CO levels to the State and federal CO standards which were presented above.

To determine if the Project could cause emission levels in excess of the CO standards discussed above, a sensitivity analysis is typically conducted to determine the potential for CO “hot spots” at a number of intersections in the general Project vicinity. Because of reduced speeds and vehicle queuing, “hot spots” potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: South Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the Level of Service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be Level of Service E during the morning peak hour and Level of Service F during the afternoon peak hour.

The Traffic Study showed that the Project would generate a maximum of approximately 2,404 net daily vehicle trips. The intersection with the highest traffic volume is located at the intersection of Imperial Street and 7th Street and has a Future Cumulative with Project evening peak hour volume of 1,436 vehicles. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. **Therefore, as the highest traffic volumes at this intersection would fall short of 100,000 vehicles, no CO "hot spot" modeling was performed and no significant impact is anticipated to local air quality with the ongoing operation of the Project. No mitigation measures are required.**

(ii) Local Air Quality Impacts from On-Site Operations

The Project would consist of the development of live-work apartments, offices, and retail/restaurant land uses, and would not include any industrial or other land uses involving the use, storage, or processing of carcinogenic or non-carcinogenic toxic chemicals or air contaminants, or the generation of high levels of diesel truck activity.

The SCAQMD recommends that operational health risk assessments be conducted for substantial sources of operational DPM (e.g., truck stops and warehouse distribution

facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[17] Project operations would generate only minor amounts of diesel emissions from mobile sources, such as delivery trucks and occasional maintenance activities. Furthermore, Project trucks are required to comply with the applicable provisions of the CARB 13 CCR, Section 2025 (Truck and Bus regulation) to minimize and reduce PM and NOx emissions from existing diesel trucks. Therefore, the Project operations would not be considered a substantial source of diesel particulates.

In addition, Project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings and other products. Area sources that would generate TAC emissions include charbroiling activities associated with the restaurant uses and consumer products associated with re-applying architectural coatings and cleaning building surfaces. Charbroiling has the potential to generate small amounts of chemicals that are known or suspected by the State of California to cause human health impacts. However, restaurants incorporating charbroiling in the Air Basin would be required to comply with SCAQMD Rule 1138 (Control of Emissions from Restaurant Operations), which requires the installation of emissions controls on charbroilers.

With respect to the use of consumer products and architectural coatings, the residential and retail uses associated with the Project would be expected to generate minimal emissions from these sources. The Project's land uses would not include installation of industrial-sized paint booths or require extensive use of commercial or household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any substantial amounts in conjunction with operation of the proposed land uses within the Project Site. Based on the uses expected on the Project Site, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD numerical indicator of significance.

Therefore, impacts to sensitive receptors associated with the release of TACs from the Project would be less than significant.

(2) Increased Commercial Flexibility Option

(a) Construction

Similar to the Project, peak daily emissions during construction for the Flexibility Option would not exceed the applicable construction LSTs for 2-acres of disturbance in SRA 1.

[17] *http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.*

As shown in **Table IV.A-14, Maximum Number of Acres Disturbed Per Day Flexibility Option**, the maximum number of acres disturbed in a day would be 2 acres during demolition. The local air quality emissions from construction of the Flexibility Option were analyzed using same methodology as was used for the Project.

Table IV.A-14
Maximum Number of Acres Disturbed Per Day Flexibility Option

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Demolition	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	3	0.5	1.5
Total for phase		**-**	**-**	**2**
Grading	Rubber Tired Dozers	1	0.5	0.5
	Graders	0	0.5	0
	Tractors/Loaders/Backhoes	2	0.5	1
Total for phase		**-**	**-**	**1.5**

Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2011b.

The nearest sensitive receptors to the Flexibility Option are the same as for the Project Site. **Table IV.A-15, Local Construction Emissions at the Nearest Receptors Flexibility Option** shows the on-site emissions from the CalEEMod model for the different construction phases and the LST emissions thresholds.

The data provided in **Table IV.A-15,** shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. **Therefore, a less than significant local air quality impact would occur from construction of the Flexibility Option. No mitigation measures are required.**

Table IV.A-15
Local Construction Emissions at the Nearest Receptors Flexibility Option

Activity	On-Site Pollutant Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	19.70	14.49	1.86	1.10
Grading	13.43	9.85	2.50	1.61
Building Construction	13.64	12.90	0.68	0.66
Architectural Coating	1.41	1.81	0.08	0.08
SCAQMD Thresholds[a]	**108**	**1,048**	**8**	**5**
Exceeds Threshold?	**No**	**No**	**No**	**No**

[a] *The nearest sensitive receptors to the Project Site include: the residential land uses located approximately 55 feet (~16 meters) west of the site (across Mateo St) and to the east (across Imperial St); therefore, the 25 meter threshold was used.*
Note: The Project would disturb up to a maximum of 2 acres a day during demolition (see Table IV.A-14).
Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 2 acres at a distance of 25 m in SRA 1 Central Los Angeles.

With respect to TACs, similar to the Project, the Flexibility Option would not result in a long-term (i.e., lifetime or 30-year) exposure as a result of construction. Furthermore, as

shown above in **Tables IV.A-10** and **IV.A-15**, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds.

The construction activities associated with the Flexibility Option would be similar to other development projects in the City, and would be subject to the regulations and laws relating to toxic air pollutants at the regional, State, and Federal level that would protect sensitive receptors from substantial concentrations of these emissions. **Thus, TAC emissions from construction of the Flexibility Option would be less than significant. No mitigation measures are required.**

(b) Operation-Related Local Air Quality Impacts

Similar to the Project, the Flexibility Option has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from onsite operations per LST methodology, and odor impacts.

(i) Localized Carbon Monoxide Impacts from Flexibility Option-Generated Vehicular Trips

The Traffic Study showed that the Flexibility Option would generate a maximum of approximately 2,467 net daily vehicle trips. The intersection with the highest traffic volume is located at the intersection of Imperial Street and 7th Street and has a Future Cumulative with Project evening peak hour volume of 1,436 vehicles. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. **Therefore, as the highest traffic volumes at this intersection would fall short of 100,000 vehicles, no CO "hot spot" modeling was performed and no significant long term air quality impact is anticipated to local air quality with the ongoing use of the Flexibility Option. No mitigation measures are required.**

(ii) Local Air Quality Impacts from On-Site Operations

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, onsite usage of natural gas appliances as well as the operation of vehicles on-site may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The nearest sensitive receptors to the Project Site include: the residential uses at the Toy Factory Lofts and National Biscuit Company Building to the west (55 feet), residential uses at the Amp Lofts to the east (55 feet), and residential uses at the Brick Lofts to the north (165 feet).

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The Flexibility Option is a mixed use development consisting of residential and retail/commercial uses. As the majority of operational emissions are sourced from off-site, no long-term localized significance threshold analysis is warranted. **Therefore, the Flexibility Option's contribution to local operational air quality emissions would not be cumulatively considerable and, thus, would be less than significant. No mitigation measures are required.**

(iii) Toxic Air Contaminants

The Flexibility Option would consist of the development of live-work apartments, offices, and retail/restaurant land uses, and would not include any industrial or other land uses involving the use, storage, or processing of carcinogenic or non-carcinogenic toxic chemicals or air contaminants, or the generation of high levels of diesel truck activity.

In addition, Flexibility Option operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities. Area sources that would generate TAC emissions include charbroiling activities associated with the restaurant uses and consumer products associated with re-applying architectural coatings and cleaning building surfaces. However, restaurants incorporating charbroiling in the Air Basin would be required to comply with SCAQMD Rule 1138 (Control of Emissions from Restaurant Operations), which requires the installation of emissions controls on charbroilers.

With respect to the use of consumer products and architectural coatings, the residential and retail uses associated with the Flexibility Option would be expected to generate minimal emissions from these sources. Similar to the Project, based on the uses expected on the Project Site under the Flexibility Option, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD numerical indicator of significance. **Therefore, impacts to sensitive receptors associated with the release of TACs from the Flexibility Option would be less than significant. No mitigation measures are required.**

(3) Mitigation Measures

The Project and the Flexibility Option would not expose sensitive receptors to substantial pollutant concentrations. Therefore, no mitigation measures are required.

(4) Level of Significance After Mitigation

The Project and the Flexibility Option would not expose sensitive receptors to substantial pollutant concentrations and would be less than significant without mitigation.

Threshold d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As discussed previously and in the Initial Study (see **Appendix A.2** to this Draft EIR), the Project and the Flexibility Option would have no impact with respect to Threshold (d).

Furthermore, according to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. As the Project and the Flexibility Option would not include operational elements related to industrial projects, no long-term operational objectionable odors are anticipated. **Therefore, potential impacts associated with objectionable odors would be less than significant. No mitigation measures are required.**

(1) Mitigation Measures

The Project and the Flexibility Option would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Therefore, no mitigation measures are required.

(2) Level of Significance After Mitigation

The Project and the Flexibility Option would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and would have no impact.

4. Cumulative Impacts

The following cumulative impacts analysis is based on the recommendations included in SCAQMD's CEQA Air Quality Handbook. According to SCAQMD, individual projects that exceed SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment.

As identified in **Section III, Environmental Setting**, of this Draft EIR, a total of 20 related projects are located in the vicinity of the Project Site. A map of the related project

locations is provided in **Figure III-2, Location of Related Projects** in **Section III, Environmental Setting**, of this Draft EIR.

a) Impact Analysis

Due to the similarity in land uses, operational characteristics and project design features between the Project and the Flexibility Option, the impacts of the Project and the Flexibility Option related to cumulative air quality impacts would be essentially the same. Therefore, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Construction

As discussed under the thresholds above, the Project's construction-related air quality emissions and cumulative impacts would be less than significant. The Project would comply with regulatory requirements. Furthermore, construction-related daily emissions at the Project Site would not exceed any of SCAQMD's regional or localized significance thresholds including NO_X, CO, PM_{10} and $PM_{2.5}$. **Therefore, the contribution of the Project and Flexibility Option to cumulative air quality impacts from construction emissions would not be cumulatively considerable and, therefore, would be less than significant.**

The greatest potential for TAC emissions at each related project would generally involve diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. 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 exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Construction activities are temporary and short-term events, thus construction activities at each related project would not result in a long-term substantial source of TAC emissions. Additionally, SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information do not require an HRA for short-term construction emissions. It is, therefore, not required or meaningful to evaluate long-term cancer impacts from construction activities which occur over relatively short durations. **As such, given the short-term nature of these activities, cumulative toxic emission impacts of the Project and Flexibility Option during construction would be less than significant.**

(2) Operation

Cumulative projects include local development as well as general growth within the Project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area and have the potential to create regional emission impacts. Therefore, from an air quality standpoint, the geographic scope of cumulative analysis would extend beyond any local projects and when wind patterns are considered would cover an even larger area. Accordingly, consistent with the SCAQMD guidance described above the cumulative analysis for the Project 's air quality impacts is regional in nature.

The Project area is out of attainment for ozone and in 2018 was out of attainment for PM10 and PM2.5. Operation of cumulative projects will further degrade the local air quality, as well as the air quality of the Air Basin. The greatest cumulative impact on the quality of regional Basin will be the incremental addition of pollutants mainly from increased traffic volumes from residential, commercial, and industrial development. However, in accordance with the SCAQMD methodology, emissions from individual projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

Project operations would generate emissions of NOx, ROG, CO, PM_{10}, and $PM_{2.5}$ that would not exceed the SCAQMD regional or local thresholds.

Since the Project would not introduce any substantial stationary sources of emissions, CO is the benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. As indicated earlier, no violations of the state and federal CO standards are projected to occur for the Project, based on the magnitude of traffic the Project is anticipated to create. **Therefore, operation of the Project and the Flexibility Option would not result in a cumulatively considerable net increase for nonattainment of criteria pollutants or ozone precursors. As a result, the Project and Flexibility Option would result in a less than significant cumulative impact for operational emissions.**

b) Mitigation Measures

Under both the Project and the Flexibility Option, cumulative impacts to air quality would be less than significant; no additional mitigation would be required.

c) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, cumulative impacts to air quality would be less than significant; no additional mitigation would be required.