4.2 AIR QUALITY

4.2.1 INTRODUCTION

This section of the Recirculated Draft Environmental Impact Report (Recirculated Draft EIR) examines air quality emissions that would result from construction and operations associated with the proposed Inglewood Transit Connector Project (proposed Project or ITC Project).

The proposed Project would relieve traffic congestion within the Project area and the surrounding street network; improve access options and the travel experience for passengers to the City of Inglewood (City)'s major activity centers and provide a connection to the regional Los Angeles County Metropolitan Transportation Authority (Metro) rail system. The proposed Project includes an Automated Transit System (ATS) train, which would provide access to the City's major activity centers, including The Forum, the Los Angeles Sports and Entertainment District (LASED) including SoFi Stadium, and the Inglewood Basketball and Entertainment Center (IBEC) including the Intuit Dome. The ATS trains would transport passengers between the Metro rail system and the City's activity centers. Air quality emissions were analyzed using a variety of modeling techniques and are detailed within the following appendices to this Recirculated Draft EIR:

- *Air Quality and Heath Risk Assessment Technical Report for the Inglewood Transit Connector Project,* Meridian Consultants LLC, September 2021 (**Appendix G.1**)
- *Vons Replacement CalEEMod Output Sheets*, Meridian Consultants LLC, October 2021 (**Appendix G.2**)

Prior to the preparation of the December 2020 Draft EIR, a recirculated Initial Study (included as **Appendix A.2** of this Recirculated Draft EIR) was prepared to assess potential environmental impacts associated with air quality. For one of these impacts, the Initial Study found that the proposed Project would have a less than significant impact, thus, no further analysis of this topic is required in this EIR. The Initial Study concluded:

- Potential impacts related to objectionable odors affecting a substantial number of people were evaluated and determined to have a less than significant impact. Though the proposed Project may produce discernable odors during construction, these odors would decrease, dilute, and become unnoticeable. Moreover, operation of the proposed Project would not include any odor producing land uses.

After circulation of the December 2020 Draft EIR for public review, the City revised the design of the proposed Project in response to consultation with key stakeholders in the community and comments received on the December 2020 Draft EIR. Specific changes to the proposed Project include raising the height of the ATS guideway along Market Street to preserve existing views of historic buildings, relocating

the Prairie Avenue/Pincay Drive Station to the southwest corner of Prairie Avenue and Manchester Boulevard, redesign of the proposed MSF to allow this facility to be located on the proposed site with a new Vons store, and realignment of the guideway and stations on Prairie Avenue to the west side of Prairie Avenue.

Additionally, the construction phasing plan has been refined. As it relates to air quality impacts, these changes include updated construction and operational details which resulted in reductions of air quality emissions compared to the December 2020 Draft EIR. Moreover, the previous significant and unavoidable impact related to construction emissions disclosed in the December 2020 Draft EIR has been reduced to a less than significant impact with mitigation incorporated.

These changes to the design of the proposed Project do not create the potential for significant impacts related to objectionable odors affecting a substantial number of people.

Other impacts found to be less than significant are further discussed in **Section 6.4: Effects Found Not to Be Significant**.

Please see **Section 8.0** for a glossary of terms, definitions, and acronyms used in this Recirculated Draft EIR.

4.2.2 OVERVIEW OF AIR QUALITY

The proposed Project 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 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, 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 aircrafts, ships, trains, 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.

The United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) designate air basins where air pollution levels exceed the State or federal ambient air quality standards (AAQS) as "nonattainment" areas. 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. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, an area is considered "unclassified." Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Transportation conformity for nonattainment and maintenance areas is required under the federal Clean Air Act (CAA) to ensure federally supported highway and transit projects conform to the State Implementation Plan (SIP). The USEPA approved California's SIP revisions for attainment of the 1997 8-hour ozone (O_3) National AAQS for the Basin in October 2019.

Ambient air pollution can cause public health concerns and can contribute to increases in respiratory illness and death rates. Air pollution can affect the health of both adults and children. The adverse health effects associated with air pollution are diverse and include cardiovascular effects, premature mortality, respiratory effects, cancer, reproductive effects, neurological effects, and other health outcomes. [1]

4.2.2.1 Criteria Air Pollutants

The criteria air pollutants that are most relevant to current air quality planning and regulation in the 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), and lead (Pb). In addition, volatile organic compounds (VOC) and toxics air contaminants (TACs) are a concern in the Basin but are not classified under AAQS. The characteristics of each of these pollutants are briefly described below.

1 South Coast Air Quality Management District (SCAQMD), 2016 Air Quality Management Plan*, Appendix I: Health Effects (March 2017),* https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-i.pdf?sfvrsn=14. Accessed September 2021.

Ozone (O_3)

Ozone is a highly reactive and unstable gas that is formed when reactive organic gases (ROGs), sometimes referred to as VOCs, and nitrogen oxides (NOx), byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone 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.

Carbon Monoxide (CO)

CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. Carbon monoxide 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 carbon monoxide is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of carbon monoxide in the Basin. The highest ambient carbon monoxide concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide (NO_2)

NO_2 is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO), similar to O_3. NO_2 is also a byproduct of fuel combustion. NO and NO_2 are collectively referred to as NOx and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}.

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

Particulate Matter (PM) consists of small liquid and solid particles floating in the air, including smoke, soot, dust, salts, acids, and metals and can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Sources of PM_{10} emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands. [2] Sources of $PM_{2.5}$ emissions include combustion of gasoline, oil, diesel fuel, or wood. PM_{10} and $PM_{2.5}$ may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NOx, and certain organic compounds.

Sulfur Dioxide (SO_2)

SO_2 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, as well as from chemical processes occurring at

2 California Air Resources Board, *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}),* https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm. Accessed September 2021.

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 (SOx).

Lead (Pb)

Lead occurs in the atmosphere as particulate matter and is also considered a TAC. 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. 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 resuspended 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. While the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook contains numerical indicators of significance for lead, project construction and operation would not include sources of lead emissions and would not exceed the numerical indicators for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from infrastructure projects.

Volatile Organic Compounds (VOCs)

VOCs include any compound of carbon, excluding CO, carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. VOC emissions often result from the evaporation of solvents in architectural coatings. Reactive organic gases are any reactive compounds of carbon, excluding methane, CO, CO_2 carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. ROG emissions are generated from the exhaust of mobile sources. [3] Both VOCs and ROGs are precursors to ozone and the terms can be used interchangeably. [4]

Toxic Air Contaminants (TACs)

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed previously, but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause

3 SCAQMD, Appendix A: Calculation Details for CalEEMod (October 2017), http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6. Accessed September 2021.

4 Both VOC and ROGs are precursors to ozone so they are summed in the CalEEMod report under the header ROG. For the purposes of comparing the ROG value to a VOC significance threshold, the terms can be used interchangeably.

cancer and noncarcinogenic TACs can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. [5] Diesel Particulate Matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 micrometer [µm]), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 µm). Collectively, these particles have a large surface area, which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

4.2.2.2 Health Effects of Pollutants

Elevated concentrations of certain air pollutants in the atmosphere have been recognized to cause health problems and consequential damage to the environment either directly or in reaction with other pollutants. In the United States, such pollutants have been identified and are regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the USEPA and are subject to emissions control requirements adopted by federal, State, and local regulatory agencies. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted pertaining to them.

The EPA established the National Ambient Air Quality Standards (NAAQS) to "provide public health protection, including protecting the health of 'sensitive' populations such as asthmatics, children, and the elderly," allowing "an adequate margin of safety." California Ambient Air Quality Standards (CAAQS) were "established to protect the health of the most sensitive groups in our communities" and "defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment." [6]

Ozone

According to the USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath. Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat;

5 The complete list of such substances is located at https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

6 California Air Resources Board, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed September 2021.

inflame and damage the airways; aggravate lung diseases such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.[7]

Long-term exposure to ozone is linked to aggravation of asthma and is likely to be one of many causes of asthma development. Long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children.[8] According to CARB, inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms, and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.[9]

The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.[10] Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure.[11] According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.[12] Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults.

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NOx)

According to the USEPA, short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory

7 US Environmental Protection Agency, *Health Effects of Ozone Pollution*, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed September 2021.
8 US Environmental Protection Agency, *Health Effects of Ozone Pollution.* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed September 2021.
9 California Air Resources Board, *Ozone & Health, Health Effects of Ozone*, https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed September 2021.
10 US Environmental Protection Agency, *Health Effects of Ozone Pollution,* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed September 2021.
11 US Environmental Protection Agency, *Health Effects of Ozone Pollution,* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, Accessed September 2021.
12 California Air Resources Board, *Ozone & Health, Health Effects of Ozone,* https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed September 2021.

infections. According to CARB, controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics.[13]

In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.[14] Infants and children are particularly at risk from exposure to NO_2 because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.

CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO_2 and there is only limited information for NO and NOx, as well as large uncertainty in relating health effects to NO or NOx exposure.[15]

Carbon Monoxide (CO)

According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.[16] Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.

According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.[17] For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies, infants, elderly people, and people with

13 California Air Resources Board*, Nitrogen Dioxide & Health,* https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed September 2021.

14 California Air Resources Board, *Nitrogen Dioxide & Health,* https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed September 2021.

15 California Air Resources Board, *Nitrogen Dioxide & Health,* https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health.

16 US Environmental Protection Agency, *Carbon Monoxide (CO) Pollution in Outdoor Air,* https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution, Accessed September 2021.

17 California Air Resources Board, *Carbon Monoxide & Health,* https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed September 2021.

anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.

Sulfur Dioxide (SO_2)

According to the USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult.[18] According to CARB, health effects at levels near the State one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO_2 (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.[19] Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2.[20,21]

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

According to CARB, both PM_{10} and $PM_{2.5}$ can be inhaled, with some depositing throughout the airways; PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung, while $PM_{2.5}$ is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation.[22] Short-term (up to 24 hours duration) exposure to PM_{10} has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. The effects of long-term (months or years) exposure to PM_{10} are less clear, although studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer.

Short-term exposure to $PM_{2.5}$ has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. Long-term exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung

18 US Environmental Protection Agency, *Sulfur Dioxide (SO_2) Pollution*, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics. Accessed September 2021.

19 California Air Resources Board, *Sulfur Dioxide & Health*, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed September 2021.

20 California Air Resources Board*, Sulfur Dioxide & Health*, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed September 2021.

21 US Environmental Protection Agency, Sulfur Dioxide (SO_2) Pollution.

22 California Air Resources Board, *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}),* https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm. Accessed September 2021.

function growth in children.[23] According to CARB, populations most likely to experience adverse health effects with exposure to PM_{10} and $PM_{2.5}$ include older adults with chronic heart or lung disease, children, and asthmatics. Children and infants are more susceptible to harm from inhaling pollutants such as PM_{10} and $PM_{2.5}$ compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.

Lead (Pb)

Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system, and affects the oxygen carrying capacity of blood. The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.[24] Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. TACs may exist as PM_{10} and $PM_{2.5}$ or as vapors (gases). TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. The emission of a TAC does not automatically create a health hazard. Other factors, such as the amount of the TAC, its toxicity, how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. Emissions of TACs into the air can be damaging to human health and to the environment. Human exposure to TACs at sufficient concentrations and durations can result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. TACs deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a

23 California Air Resources Board, *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*, https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm. Accessed September 2021.

24 California Air Resources Board, *Lead & Health*, https://ww2.arb.ca.gov/resources/lead-and-health. Accessed September 2021.

particular public health concern because many scientists currently believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.[25]

The public's exposure to TACs is a significant public health issue in California. In the wake of publicity surrounding planned and unplanned releases of toxic chemicals into the atmosphere, he Air Toxics "Hotspots" Information and Assessment Act was enacted in September 1987 and is a State law requiring facilities to report emissions of TACs to air districts.[26] The program is designated to quantify the amounts of potential TACs released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks. The State Air Toxics Program (AB 2588) identified over 200 TACs, including the 188 TACs identified in the CAA.[27]

The USEPA has assessed this expansive list and identified 21 TACs as Mobile Source Air Toxics (MSATs).[28] MSATs are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. USEPA also extracted a subset of these 21 MSAT compounds that it now labels as the nine priority MSATs: 1,3-butaidene, acetaldehyde, acrolein, benzene, diesel particulate matter (DPM)/diesel exhaust organic gases, ethylbenzene, naphthalene, and polycyclic organic matter (POM). While these nine MSATs are considered the priority transportation toxics, USEPA stresses that the lists are subject to change and may be adjusted in future rules.[29]

Diesel Exhaust

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from the exhaust of diesel-fueled engines (i.e., DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances).

Diesel exhaust is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-

25 US Environmental Protection Agency, *Hazardous Air Pollutants,* https://www.epa.gov/haps. Accessed September 2021.
26 California Air Resources Board, General Information About "Hot Spots." https://www.arb.ca.gov/ab2588/general.htm. Accessed September 2021.
27 California Air Resources Board. AB 25188 Air Toxics "Hot Spots" Program. https://www.arb.ca.gov/ab2588/ab2588.htm. Accessed September 2021.
28 US Environmental Protection Agency, Air Toxics Risk Assessment Reference Library, Volume 1 Technical Resource Manual. April 2004.
29 US Department of Transportation Federal Highway Administration, 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October 18, 2016.

butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels, and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

The most common exposure to DPM is breathing air that contains diesel exhaust. The fine and ultra-fine particles are respirable (similar to $PM_{2.5}$), which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lungs. Exposure to DPM comes from both on-road and off-road engine exhaust that is either directly emitted from the engines or lingering in the atmosphere.

Diesel exhaust causes health effects from long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Individuals also react differently to different levels of exposure. There is limited information on exposure to only DPM, but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes chronic health effects as well as having cancer-causing potential.

Because it is part of $PM_{2.5}$, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death, hospitalizations, and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies. Those most vulnerable to noncancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.[30]

Gasoline Exhaust

Similar to diesel exhaust, gasoline is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of the same TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. Gasoline exhaust is primarily

30 California Air Resources Board, *Overview: Diesel Exhaust & Health,* https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed September 2021.

emitted from light-duty passenger vehicles. The compounds in the gas and particles phases can cause health effects from short- and long-term exposures similar to those described under the TAC and particulate matter discussions above.

Visibility Reducing Particles

Visibility-reducing particles are any particles in the atmosphere that obstruct the range of visibility by creating haze.[31] These particles vary in shape, size, and chemical composition, and come from a variety of natural and manmade sources including windblown metals, soil, dust, salt, and soot. Other haze-causing particles are formed in the air from gaseous pollutant (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of fine PM, such as $PM_{2.5}$ and PM_{10}, and are caused from the combustion of fuel. CARB's standard for visibility reducing particles is not based on health effects, but rather on welfare effects, such as reduced visibility and damage to materials, plants, forests, and ecosystems. The health impacts associated with $PM_{2.5}$ and PM_{10} are discussed above under Particulate Matter.

4.2.3 METHODOLOGY

4.2.3.1 Emissions Inventory Modeling

Development of the proposed Project would generate air pollutants from a number of individual sources during both construction and post-construction (operational) use. Intermittent, short-term construction emissions that occur from activities such as demolition, site-grading, concrete construction, and other activities are evaluated. Emissions from operation of the Project, including any reductions in emissions are also evaluated. Regulatory models used to estimate air quality and health impacts include:

- CARB's EMFAC2017[32] emissions inventory model. EMFAC2017 is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC2017 can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.
- CARB OFFROAD2017 emissions inventory model. OFFROAD[33] is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show

31 California Air Resources Board, *Visibility Reducing Particles and Health,* https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed September 2021.

32 California Air Resources Board, *EMFAC2017 User's Guide,* March 1, 2018, https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-i-users-guide.pdf and https://www.arb.ca.gov/emfac/2017/. Accessed September 2021.

33 California Air Resources Board, *OFFROAD Instructions,* https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road. Accessed September 2021.

how California off-road equipment emissions have changed over time and are projected to change in the future.

- American Meteorological Society/USEPA Regulatory Model (AERMOD). AERMOD (Version 19191) is an atmospheric dispersion model which can simulate point, area, volume, and line emissions sources and has the capability to include simple, intermediate, and complex terrain along with meteorological conditions and multiple receptor locations.[34,35] AERMOD is commonly executed to yield 1-hour maximum and annual average concentrations (in parts per million or ppm and micrograms per cubic meter or µg/m3) at each receptor. AERMOD is used to estimate air concentrations at nearby receptors resulting from the activities associated with an air emission source (such as construction equipment).
- The California Emissions Estimator Model (CalEEMod),[36] is the CARB-approved computer program model recommended by SCAQMD for use in the quantification of air quality emissions. CalEEMod was developed under the auspices of SCAQMD, with input from other California air districts. CalEEMod utilizes widely accepted models for emissions estimates combined with appropriate data that can be used if site-specific information is not available. For example, CalEEMod incorporates USEPA-developed emission factors; CARB's on-road and off-road equipment emission models, such as EMFAC and OFFROAD; and studies commissioned by other California agencies, such as the California Energy Commission and CalRecycle.

4.2.3.2 Construction

The proposed Project Construction Phasing Narrative provided in **Appendix F.1: Construction Phasing Narrative** was used to estimate construction air quality emissions associated with the proposed Project.

Construction of the proposed Project would have the potential to temporarily emit criteria air pollutant emissions through the use of heavy-duty construction equipment and through vehicle trips generated from workers and haul trucks traveling to and from construction areas. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Construction emissions can vary substantially from day to day, depending on the intensity and specific type of construction activity. The maximum daily regional emissions are predicted values for the worst-case day and do not represent the emissions that would actually occur during every day of construction. The maximum daily emissions of pollutants were compared to the respective SCAQMD thresholds.

34 United States Environmental Protection Agency Preferred/Recommended Models, *AERMOD Modeling System*, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod. Accessed September 2021.

35 Title 40 CFR Part 51, *Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions;* Final Rule, http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf. Accessed September 2021.

36 CalEEMod, http://www.caleemod.com/. Accessed September 2021.

Construction Schedule

The construction phasing as described below represents a conservative set of assumptions for analysis of the maximum potential impacts from construction of the proposed Project. It is likely that these construction phases will overlap to provide the most efficient construction schedule and be refined as design and implementation of the Project progresses once a contractor is selected for the delivery of the proposed Project. Prior to construction of the proposed Project, reconstruction of the existing Vons store proposed to be demolished to allow construction of the MSF is proposed on the corner of Manchester Boulevard and Hillcrest Boulevard.

- **Phase 1** would include demolition of buildings and site improvements on properties acquired for construction of the project, the beginning of construction of the maintenance and storage facility (MSF), trenching and installation of primary power duct bank, and preparatory work on east side of Prairie Avenue to allow for the roadway shift. Additional work in the area will occur in Phase 4 for the installation of drilled shafts and columns along Prairie Avenue for the guideway. The properties where existing buildings and site improvements will be demolished include at the existing retail commercial center at Market Street and Regent Street, the commercial buildings located at 500 Manchester Boulevard, the commercial building at 150 S. Market Street on the northeast corner of Manchester and Market Street, the retail commercial center at northwest corner of Prairie Avenue and Hardy Street, the commercial building at 401 S. Prairie Avenue, the commercial building at 945 S. Prairie Avenue, and the commercial building at 1003 S. Prairie Avenue. After demolition, the remaining asphalt flatwork areas at the commercial plaza at Market Street and Regent Street, and the commercial building at 150 S. Market Street, and the retail commercial center at northwest corner of Prairie Avenue and Hardy Street will provide suitable space for construction staging, including but not limited to, space for equipment storage, material staging and storage, contractor jobsite trailers, and on-site parking for construction staff throughout the entire project duration. Phase 1 construction would start in January 2024.
- **Phase 2** would include activities to enable the construction sequence of the guideway along Prairie Avenue from Hardy Street to Manchester Avenue, and work at the MSF site. Phase 2 construction would occur in 2024 through 2025.
- **Phase 3** would include foundation work for the Automated Transit System (ATS) guideway, foundation work for the Market Street/Florence Avenue Station, and construction for the support structure of the MSF building. Phase 3 work will include utility relocation (if necessary), foundations, cast-in-place (CIP) columns, and setting of prefabricated buildings at the two (Power Distribution System Substations [PDS]) substations. Phase 3 construction would occur in 2024 through 2025.
- **Phase 4** would include foundation work for the ATS guideway, guideway column caps along Market Street, and the MSF building deck and shell. Phase 4 activities will include utility relocation (if necessary), foundations, CIP columns, guideway column caps, and installation of equipment at the PDS substations. Phase 4 construction would occur in 2025 through 2026.

- **Phase 5** construction would include aerial work for the ATS guideway along Prairie Avenue from Hardy Street to Manchester Avenue and Manchester Avenue from Prairie Avenue to Market Street, guideway girder along Market Street, and MSF building interior construction. Phase 5 activities will include guideway girders, guideway straddle caps, and installation of equipment at the PDS substations. Phase 5 construction would occur in 2025 through 2026.
- **Phase 6** would include aerial work for the ATS guideway along Prairie Avenue from Hardy Street to Manchester Boulevard and Manchester Boulevard from Prairie Avenue to Market Street, completion of Prairie Avenue/Manchester Boulevard Station, completion of Prairie Avenue/Hardy Street Station, and completion of the MSF building, and the elevated passenger walkway to the Los Angeles County Metropolitan Transportation Authority (Metro) K Line Downtown Inglewood Station. Phase 6 construction would occur in 2025 through 2026.
- **Phase 7** would include final site work and completion of the stations. Phase 7 would occur in 2026.
- **Phase 8** would occur for the guideway along the entire length of the alignment and primarily incudes installation of the operating systems and testing and commissioning of the ATS trains. Phase 8 construction would occur in 2025 through 2027, with the primary construction activities occurring in 2026 and some installation of equipment starting towards the end of Phase 3 construction when sufficient aerial structure is available for the installation of the equipment.

Construction activity would occur 24 hours a day, seven days a week with activities occurring over a 16-hour/day schedule with two shifts, either a morning shift from approximately 7:00 AM to 3:00 PM and an evening shift from approximately 3:00 PM to 11:00 PM, or a morning shift from approximately 7:00 AM to 3:00 PM and a night shift from approximately 11:00 PM to 7:00 AM. The night shift would be used for material deliveries, export of soil and debris and other light construction activities. Certain heavy construction activities that necessitate temporary road closures could occur at night-time to minimize traffic impacts.

Combinations of these shifts would be referred to “Morning/Evening” or “Morning/Night.” Other minimal construction work could occur during other hours at a reduced intensity. The analysis of pollutant concentrations and Health Risk Assessment (HRA) results are presented for both the Morning/Evening and Morning/Night construction scenarios.

Air Emission Calculation Methodology

Air emission sources include combustion exhaust from on-road vehicles such as construction worker vehicles, pickup/delivery trucks, and haul trucks, as well as off-road construction equipment such as backhoes, loaders, and graders. Fugitive dust emissions from vehicles from handling of soils and entrainment of dust in vehicle tires are also sources of PM_{10} and $PM_{2.5}$.

On-Road Vehicles

Vehicular on-road emissions were computed using the CARB's emission factor model, EMFAC2017.[37] Construction worker trips were modeled using the light-duty auto/truck classification. Construction worker trips are a composite of gasoline and diesel vehicles. Foreman trucks used on-site were modeled as gasoline and diesel light heavy-duty trucks. Haul trucks were modeled using the diesel combination long-haul truck classification, which is a heavy-duty truck emission factor for public vehicles. Construction worker commutes were assumed to be 12 miles per one-way trip per day. Distance traveled is conservatively assumed to be 20 miles per one-way trip per day for delivery trucks and concrete trucks.[38] Distance traveled is assumed to be 29 miles per one-way trip per day for asphalt removal trucks, asphalt pavement trucks, and soil spoils dump trucks.[39]

The total annual truck trips within each phase were assumed to be evenly distributed on any given day. The usage factor[40] for haul trucks is approximately 25 percent. Paved road dust, brake wear, and tire wear particulate emissions were also accounted for and included in the analysis using EMFAC2017 emission factors and methodologies. For haul trucks, exhaust particulate emissions are approximately 14 percent of the total particulate emissions.

Criteria pollutant emissions associated with on-road vehicles were calculated for each construction year (2024 to 2027) by combining the activity information with emissions factors, in grams per mile, derived using the EMFAC2017 emissions model. The EMFAC2017 emissions factors are summarized in **Appendix G.1: Air Quality and Human Health Risk Assessment** for employee vehicles, pickup trucks, delivery trucks, and haul trucks for construction years 2024 through 2027.

Off-Road Equipment

Construction of the proposed Project would require the use of heavy-duty equipment, such as excavators, loaders, forklifts, backhoes, cranes, and off-road haul trucks.

Emissions from construction activities were estimated based on the projected construction activity schedule, the number of vehicles/pieces of equipment, the types of equipment/type of fuel used, vehicle/equipment utilization rates, equipment horsepower, and the construction year. This data was based on the Inglewood Transit Connector Project: Baseline Construction Phasing Narrative by Gannett Fleming (dated October 4, 2021).

37 *California Emissions Estimator Model (CalEEMod),* Version 2016.3.2

38 The maximum distance from four supporting facilities to the proposed Project is 20 miles: CalPortland, Catalina Pacifica Concrete, Cemex-Inglewood, and Robertson's Read Mix.

39 The distance to Whittier Landfill from the proposed Project is 29 miles.

40 Activity level (or usage factor) are defined as the percent of operation for a piece of equipment over a given time.

Emissions from construction activities were also estimated based on load factor (throttle setting)[41] and usage factor.[42]

For the daily emission estimates and short-term ambient concentration analysis (1-hour to 24-hour averaging periods), a usage factor of 100 percent was applied (i.e., full-time operation) to produce a conservative analysis. For the long-term ambient concentration analyses and the health risk assessment, the usage factor of less than 100 percent was applied by equipment type, as not all of the equipment can be used every hour of the day and every day of the year due to safety issues and manpower constraints.

This information was applied to criteria pollutant emissions factors, in grams per horsepower-hour, primarily derived using the OFFROAD emissions model. Off-road construction equipment emissions were computed, and the emissions factors used in this assessment are summarized, by equipment type within **Appendix G.1** for 2024 through 2027, respectively**.**

4.2.3.3 Operation

Analysis of the proposed Project's operational emissions considers three types of sources: 1) area; 2) energy; and 3) mobile. A description of the proposed Project's various operational components is detailed in **Section 3.0: Project Description**, *3.5: Project Characteristics*.

Area

Operation of the proposed Project would generate criteria air pollutant emissions from area sources such as operation of landscaping equipment and use of consumer products, including solvents used in nonindustrial applications which emit VOCs during their product use, such as cleaning supplies. The operational area emissions from the proposed Project were estimated using the CalEEMod[43] software. Area source emissions are based on architectural coatings, landscaping equipment, and consumer product usage rates provided in CalEEMod.

Natural Gas

Operation of the proposed Project would generate criteria air pollutant emissions from natural gas combustion. Energy source emissions are generated as a result of activities in buildings which utilize natural gas utility infrastructure. The operational energy emissions from the proposed Project were estimated using the CalEEMod[44] software. Energy source emissions were based on natural gas (building

41 Load factor (or throttle setting) are the engine performance demands, as a percent of maximum power; based on values within OFFROAD and typically ranging from 30 to 80 percent depending on equipment type.
42 Activity level (or usage factor) are defined as the percent of operation for a piece of equipment over a given time.
43 CalEEMod, http://www.caleemod.com/. Accessed September 2021.
44 CalEEMod, http://www.caleemod.com/. Accessed September 2021.

heating and water heaters) usage rates provided in CalEEMod. Natural gas usage factors in CalEEMod were based on the California Energy Commission California Commercial End Use Survey[45] (CEUS) data set, which provides energy demand by building type and climate zone. Default parameters were used when project-specific data was not available.

Mobile

Operation of the proposed Project would generate criteria air pollutant emissions from mobile sources from Project-generated vehicle trips traveling to and from the MSF and associated facilities, including the parking lots at the Market Street/Florence Avenue Station, at 150 S. Market Street, and at the MSF Facility site. Mobile emissions were calculated based on the data provided in the proposed Project's Transportation Study (see **Appendix O: Transportation Assessment Study**) which is further discussed in **Section 4.12: Transportation**. Under the Transportation Study, vehicle miles traveled (VMT) is the primary performance metric used to identify impacts. VMT associated with trips to and from all areas within the City were included in the Transportation Study and were utilized to calculate operational air quality emissions from mobiles sources. Emissions from motor vehicles are dependent on vehicle type. Thus, the emissions were calculated using a representative motor vehicle fleet mix for the proposed Project and EMFAC2017 default fuel type.

The Adjusted Baseline Environmental Setting is described in **Section 4.0: Environmental Analysis**. Project operations are expected to commence in 2027. Regulatory models used to estimate air quality from proposed Project operations include the CARB EMFAC2017[46] emissions inventory model. Consistent with the Transportation Study, six operational scenarios were analyzed to evaluate the proposed Project's indirect operational emissions, as follows:

1. Adjusted Baseline,
2. Adjusted Baseline with the proposed Project,
3. Year 2027 with Event Weekday without the proposed Project,
4. Year 2027 with Event Weekday with the proposed Project,
5. Year 2045 with Event Weekday without the proposed Project, and
6. Year 2045 with Event Weekday with the proposed Project.

45 California Energy Commission, *California Commercial End Use Survey,* https://www.energy.ca.gov/data-reports/surveys/california-commercial-end-use-survey#:~:text=The%20California%20Commercial%20End%2DUse,Commission%27s%20commercial%20sector%20forecast%20model. Accessed September 2021.

46 California Air Resources Board, *EMFAC2017 User's Guide,* March 1, 2018, https://www.arb.ca.gov/msei/downloads/emfac2017-volume-i-users-guide.pdf. Accessed September 2021.

Details of each of the above scenarios are provided in **Section 4.12** and in **Appendix O**.

The proposed Project would also produce criteria air pollutant emissions from on-site diesel-fueled emergency generators and delivery trucks. Daily maximum criteria air pollutant emissions were compared with SCAQMD thresholds for operation to determine the operational impacts of the proposed Project. Regional operational air quality impacts were assessed based on the incremental increase/decrease in emissions compared to the Adjusted Baseline. Air pollutant emissions from the existing uses to be demolished were removed from the estimated emissions for the proposed Project's operational emissions.

Backup Generators

To assure the ability to allow ATS trains to reach the nearest stations to offload riders in the event of loss of electrical supply, each PDS substation will be equipped with backup power generators. The proposed Project would include up to two stationary standby generators, one at each of the two PDS substations, with an estimated total capacity rated at approximately 4,000 kilowatts (kW) to provide emergency power primarily for ATS train operation, lighting, and other emergency systems. Emergency generator emissions were calculated based on compliance with applicable federal emissions standards and compliance with SCAQMD Rule 1470[47] (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) mandated emission limits and operating hour constraints. This analysis also assumed that the standby generators would operate up to two hours per day and a total of 50 hours per year for testing and maintenance (per SCAQMD Rule 1470 limit). SCAQMD requires that all internal combustion engines (ICE) greater than 50 brake horsepower (bhp) and gas turbines greater than 2,975,000 Btu per hour obtain a permit to construct prior to installation of the engines at a site.

A standby ICEs greater than 50 bhp or turbine for nonutility power generation that does not operate more than 200 hours a year and is only operated in the event of an emergency power failure or for routine testing and maintenance is considered an emergency backup generator for power generation. The SCAQMD allows for the use of backup generators thru specific permits prior to installation.[48]

The proposed Project would implement the following operational equipment requirements and operation protocols for operating backup generators. These would include the following:

47 SCAQMD, *Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines.*

48 SCAQMD, *Permits, Emergency Generators. http://www.aqmd.gov/home/permits/emergency-generators.* Accessed September 2021.

- All backup generators would be selected from the SCAQMD certified generators list and meet applicable federal standards for diesel emissions. For after-treatment of engine exhaust air, a diesel particulate filter would be provided to meet the emission level requirements of SCAQMD;
- The proposed Project would have two standby generators, each could operate up to two hours per day and a total of 50 hours per year for testing and maintenance (per SCAQMD Rule 1470 limit) to ensure reliability in the case of a power outage; and
- The proposed Project would conduct maintenance and/or testing on the two standby generators on separate days.

As such, each standby generator would operate for 2 hours per day during 24 days per year (twice a month) for a total of not more than 50 hours per year. Each standby generator would be tested during different days; if needed for emergency operation, both generators would operate up to 2 hours each and could occur simultaneously.

4.2.3.4 Health Risk Assessment

A health risk assessment (HRA) estimates the health impacts to be expected from a project's TAC emissions. The greatest potential for TAC emissions during Project construction would be related to diesel particulate matter emissions associated with heavy-duty equipment. Although construction would be temporary, construction health impacts associated with TACs were addressed quantitatively in an HRA. Potential impacts to human health associated with TAC emissions may include increased cancer risks and increased chronic (long-term) and acute (short-term) non-cancer health hazards from inhalation of TACs. An HRA also assesses cancer burden which is the estimated increase in the occurrence of cancer cases in a population as a result of exposure to TAC emissions. The proposed Project's HRA was conducted following the methodologies in OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments[49] and SCAQMD's Risk Assessment Procedures for Rule 1401, 1401.1 and 212.[50] In accordance with SCAQMD guidance, modeled receptors for the HRA were placed at locations in which people are typically located for a period of time. The receptors for the HRA within one quarter of a mile of the proposed Project are as follows:

- Single and multifamily residences along the proposed Project length.
- Off-site workers within industrial and commercial areas surrounding the proposed Project area.
- Recreational facilities such as Queen Park.
- Medical facilities such as Hillcrest Medical Center and Centinela Hospital Medical Center.

49 Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html. Accessed September 2021.

50 *South Coast Air Quality Management District,* Risk Assessment Procedures for Rule 1401, 1401.1 and 212, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12. Accessed September 2021.

- Educational facilities such as Inglewood High School, Inglewood Junior Academy, George W Crozier Middle School, and Kelso Elementary School.
- Off-site daycare/childcare such as South Bay Child Development Center, Tender Care Child Development Center, A Bright Beginning Child Development Center, and Debbie's Child Development Center.

Sensitive receptors located within a quarter-mile of the proposed Project are shown in **Figure 4.0-3a-c: Map of Sensitive Receptors**. All receptors were set so that only ground-level concentrations were analyzed as that is where the sensitive receptors are located.

OEHHA's Guidance Manual[51] ensures that the greater sensitivity of children to cancer and other health risks is reflected in an HRA. For example, OEHHA recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also recommends that statistical "age sensitivity factors" be incorporated into an HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the Guidance Manual revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the Guidance Manual, this assumption is lessened to 30 years.

Terrain elevations for emission source locations were based on AERMAP (Version 11103). Hourly meteorological data from Los Angeles International Airport, located approximately four miles to the west-southwest of the proposed Project was used in the dispersion modeling analysis and HRA. Once the dispersion modeling estimated TAC concentrations at the receptors, the risk assessment applied established cancer risk estimates and acceptable reference concentrations for noncancer health effects to determine carcinogenic and non-carcinogenic human health impacts, respectively.

Appendix G.1 provides additional methodologies and assumptions used within the HRA.

51 Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html. Accessed September 2021.

4.2.4 REGULATORY FRAMEWORK

4.2.4.1 Federal Regulations

Clean Air Act

The USEPA is responsible for the implementation of portions of the CAA of 1970, which regulates certain stationary and mobile sources of air emissions and other requirements. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA that are most applicable to the proposed Project include Title I, Nonattainment Provisions, and Title II, Mobile Source Provisions.

Charged with handling global, international, national, and interstate air pollution issues and policies, the USEPA sets national vehicle and stationary source emission standards, oversees the approval of all State Implementation Plans,[52] provides research and guidance for air pollution programs, and sets national AAQS (NAAQS).[53] NAAQS for the six common air pollutants (ozone, PM_{10} and $PM_{2.5}$, NO_2, CO, Pb, and SO_2) are identified in the CAA.

The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. The NAAQS were amended in September 2006 to include an established methodology for calculating $PM_{2.5}$ and to revoke the annual PM_{10} threshold. More stringent area requirements now apply including implementation of Best Available Control Measures/Best Available Control Technology (BACM/BACT), a lower major source threshold (from 100 tons per year to 70 tons per year), and an update to the reasonable further progress (RFP) analysis.[54] Title I (Nonattainment Provisions)[55] requirements are implemented for the purpose of attaining NAAQS for the following criteria air pollutants: O_3; NO_2; CO; SO_2; PM_{10}; and lead. **Table 4.2-1: Federal and State Ambient Air Standards** shows the NAAQS currently in effect for each criteria air pollutant.

52 A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National Ambient Air Quality Standards (NAAQS).

53 The NAAQS were established to protect public health, including that of sensitive individuals; for this reason, the standards continue to change as more medical research becomes available regarding the health effects of the criteria pollutants. The primary NAAQS defines the air quality considered necessary, with an adequate margin of safety, to protect the public health.

54 SCAQMD, "Final 2016 Air Quality Management Plan" (2017), http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15. Accessed September 2021.

55 USEPA, *Clean Air Act Title I - Air Pollution Prevention and Control, Parts A through D.* https://19january2017snapshot.epa.gov/clean-air-act-overview/clean-air-act-title-i-air-pollution-prevention-and-control-parts-through-d_.html. Accessed September 2021.

Table 4.2-1
Federal and State Ambient Air Standards

		California Standards[a]		National Standards[b]		
Pollutant	**Average Time**	**Concentration[c]**	**Method[d]**	**Primary[c,e]**	**Secondary[c,f]**	**Method[g]**
$O3^{h}$	1 hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
NO_2^{i}	1 hour (98th Percentile)[i]	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 pp (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 hour (Lake Tahoe)	6 ppm (7 mg/m³)		-	-	
SO_2^{j}	1 hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 pp (196 µg/m³)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 hour	-		-	.5 ppm (1300 µg/m³)	
	24 hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)j	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)j	-	
PM_{10}^{k}	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		-		
$PM_{2.5}^{k}$	**2**4 Hour	No Separate State Standard		Gravimetric or Beta Attenuation	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³ k	15 µg/m³	
$Lead^{l,m}$	**3**0 Day Average	1.5 µg/m³	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m³ (for certain areas)m	Same as Primary Standard	
	Rolling 3-Month Average	-		0.15 µg/m³		

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Visibility Reducing Particles[n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 pp (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[l]	24 hour	0.01 pp (26 µg/m^3)	Gas Chromatography			

Notes:

a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m3) is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

i To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

j On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

k On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m3 to 12.0 µg/m3.

l CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

m The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

n In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB, Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed September 2021.

4.2.4.2 State Regulations

California Clean Air Act

The California CAA,[56] signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practicable date.[57] CARB, a part of the California EPA (CalEPA), is responsible for the coordination and administration of both State and federal air pollution control programs within California. In this capacity, CARB conducts research, sets State ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions and the CAAQS currently in effect for each of the criteria pollutants, as well as for other pollutants recognized by the State. The CAAQS are more stringent than the NAAQS.

Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook*[58] on April 28, 2005, to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions.

Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural road with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 50 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

California Air Resources Board (CARB)

Mobile sources are a significant contributor to the air pollution in California. CARB has established exhaust emission standards for automobiles, which are more stringent than the federal emissions standards.

56 California Air Resources Board (CARB), California Clean Air Act (1988), https://arb.ca.gov/bluebook/bb05/HEA[14]16/HEA_[14]_16.htm. Accessed September 2021.
57 CARB, "CAAQS" (August 10, 2017), https://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm. Accessed September 2021.
58 CARB, Air Quality and Land Use Handbook: A Community Health Perspective (April 2005), https://www.arb.ca.gov/ch/handbook.pdf. Accessed September 2021.

Through its Mobile Sources Program, CARB has developed programs and policies to reduce emissions from on-road heavy-duty diesel vehicles. Specifically, the On-Road Heavy-Duty Diesel Vehicle Regulation requires diesel trucks and buses that operate in the State to be upgraded to reduce emissions. By January 1, 2023, nearly all vehicles must have engines certified to 2010 model year engines or equivalent. The Innovative Clean Transit Program (ICT) sets emissions reduction standards for new public transit vehicles and requires major transit agencies to only purchase zero emission (ZE) buses after 2029. The Solid Waste Collection Vehicle Regulation requires solid waste collection vehicles and heavy diesel-fueled on-road single engine cranes to be upgraded. The Rule for On-Road Heavy-Duty Diesel-Fueled Public and Utility Fleets requires fleets to install emission control devices on vehicles or purchase vehicles that run on alternative fuels or use advanced technologies to achieve emissions requirements by specified implementation dates. CARB also establish an In-Use Off-Road Diesel-Fueled Fleets Regulation to impose limits on idling and require fleets to retrofit or replace older engines. Stationary sources can be divided into two major subcategories: point and area sources. Point sources are permitted facilities with one or more emission sources at an identified location (e.g., power plants, refineries). These facilities generally have annual emissions of 4 tons or more of either VOC, NOx, SOx, or total Particulate Matter (PM), or annual emissions of over 100 tons of CO. Facilities are required to report their criteria pollutant emissions pursuant to Rule 301 and selected air toxics to the SCAQMD on an annual basis, subject to audit, if any of these thresholds are exceeded.

Area sources consist of many small emission sources (e.g., residential water heaters, architectural coatings, consumer products and permitted sources that are smaller than the above thresholds) which are distributed across the region and are not required to individually report their emissions. There are about 400 area source categories for which emission estimates are jointly developed by CARB and the SCAQMD.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles

The purpose of this regulation is to reduce emissions of diesel particulate matter (PM), NOx and other criteria pollutants from in-use diesel-fueled vehicles.[59] This regulation applies to any person, business, federal government agency, school district or school transportation provider that owns or operates, leases, or rents, affected vehicles that operate in California. Affected vehicles are those that operate on diesel-fuel, dual-fuel, or alternative diesel-fuel that are registered to be driven on public highways, were originally designed to be driven on public highways whether or not they are registered, yard trucks with on-road engines or yard trucks with off-road engines used for agricultural operations, both engines of two-engine

59 Title 13, California Code of Regulations Division 3: Air Resources Board Chapter 1: Motor Vehicle Pollution Control Devices. § 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles. https://ww3.arb.ca.gov/msprog/onrdiesel/documents/tbfinalreg.pdf. Accessed September 2021.

sweepers, school buses, and have a manufacturer's gross vehicle weight rating (GVWR) greater than 14,000 pounds (lbs.).

California Air Resources Board Truck and Bus Regulation

In 2008, CARB approved the Truck and Bus Regulation to reduce NOx, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet (i.e., those with a gross vehicle weight rating greater than 26,000 pounds), there are two methods to comply with the requirements. The first method is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over eight years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would need to meet or exceed the 2010 engine emission standards for NOx and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016, their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NOx emissions. Thus, fleet owners choosing the second method must still comply with the 2010 engine emission standards for their trucks and busses by 2020. Beginning January 1, 2020, this requirement will be enforced by the California Department of Motor Vehicles (DMV). Senate Bill 1 (SB1), the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017. SB1 authorizes the DMV to check that vehicles are compliant with or exempt from CARB's Truck and Bus Regulation. If a vehicle is not compliant with the rule, DMV will no longer register that vehicle starting January 1, 2020.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The

compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

CARB Rule 2449, General Requirements for In-Use Off-Road Diesel-Fueled Fleets

Requires off-road diesel vehicles to limit nonessential idling to no more than 5 consecutive minutes.[60]

CARB Rule 2480 Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools

CARB Rule 2480 requires school busses, transit busses, and commercial vehicles (gross vehicle weight greater than 10,001 pounds except for pickup trucks and zero emission vehicles) to limit nonessential idling to no more than 5 consecutive minutes when within 100 feet of a school.[61]

CARB Rule 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling[62] measure includes regulations that pertain to air quality emissions. Specifically, Section 2485 states that during construction, the idling of all diesel-fueled commercial vehicles weighing more than 10,000 pounds shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the California Code of Regulations (CCR)[63] states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

California Building Standards Code

California Energy Code

California's Energy Efficiency Standards for Residential and Nonresidential Buildings[64] were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the

60 CARB, General Requirements for In-Use Off-Road Diesel-Fueled Fleets, https://ww3.arb.ca.gov/regs/t13-regulations/s2449-2449_3.pdf. Accessed September 2021.

61 CARB, *Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools*, https://www.arb.ca.gov/regs/t13-regulations/s2480-2485.pdf. Accessed September 2021.

62 CARB, CARB Rule 2485, https://www.arb.ca.gov/msprog/truck-idling/13ccr2485_09022016.pdf. Accessed September 2021.

63 CARB, Final Regulation Order: Amendments to the Airborne Toxic Control Measure For Stationary Compression Ignition Engines (May 19, 2011), Accessed June 2020, https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/finalreg2011.pdf. Accessed September 2021.

64 California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed September 2021.

64 California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed September 2021.

design of building shells and components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The California Energy Commission (CEC) adopted 2019 Title 24 standards, which became effective on January 1, 2020, and are applicable to the proposed Project.[65] The 2019 standards will continue to improve upon prior Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings.[66]

California Green Building Code

The California Green Building Standards Code, which is Part 11 of the CCR, is commonly referred to as the CALGreen Code.[67] The most current version of the CALGreen building code went into effect in January 2020. The purpose is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, outdoor lighting standards, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.

4.2.4.3 Regional Regulations

South Coast Air Quality Management District

SCAQMD shares responsibility with CARB for ensuring that all State and federal ambient air quality standards are achieved and maintained over an area of approximately 10,743 square miles. This area includes the South Coast Air Basin (Basin) and portions of the Salton Sea and Mojave Desert Air Basins (MDAB), all of Orange County, and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. It does not include the Antelope Valley or the nondesert portion of western San Bernardino County.

SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the Basin. SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is also responsible for developing, updating, and implementing the AQMP for the Basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the national and/or California ambient air quality standards.

65 See California Energy Commission, 2019 Building Energy Efficiency Standards for additional information.
66 See California Energy Commission, 2019 Building Energy Efficiency Standards for additional information.
67 California Buildings Standards Commission, California Green Building Standards Code (Cal. Code Regs., Title 24, Part 11), http://www.bsc.ca.gov/Home/CALGreen.aspx. Accessed September 2021.

South Coast Air Quality Management District Air Quality Management Plan (AQMP)

The proposed Project lies within the jurisdiction of the SCAQMD, and compliance with SCAQMD rules and guidelines is required. SCAQMD is responsible for controlling emissions primarily from stationary sources.

The SCAQMD approved a Final 2016 AQMP on March 3, 2017.[68] The 2016 AQMP includes transportation control measures developed by SCAG from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), as well as the integrated strategies and measures needed to meet the NAAQS. The 2016 AQMP demonstrates attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards.

Under the Federal CAA, SCAQMD has adopted federal attainment plans for O3 and PM_{10}. The SCAQMD reviews projects to ensure that they would not (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay the timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The SCAQMD is responsible for limiting the number of emissions that can be generated throughout the Basin by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board. These rules and regulations limit the emissions that can be generated by various uses or activities and identify specific pollution reduction measures, which must be implemented in association with various uses and activities. These rules not only regulate the emissions of the federal and State criteria pollutants, but also toxic air contaminants and acutely hazardous materials. The rules are also subject to ongoing refinement by SCAQMD.

South Coast Air Quality Management District Rules and Regulations

Among the SCAQMD rules applicable to the proposed Project are Rule 403 (Fugitive Dust), and Rule 1113 (Architectural Coatings). Rule 403 requires the use of stringent best available control measures to minimize PM_{10} emissions during grading and construction activities. Rule 1113 will require reductions in the VOC content of coatings, with a substantial reduction in the VOC content limit for flat coatings to 50 grams per liter (g/L) in July 2008.[69] Additional details regarding these rules and other potentially applicable rules are presented as follows.

68 SCAQMD, *Final 2016 Air Quality Management Plan* (2016), https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed September 2021.

69 SCAQMD, Rule 1113 Architectural Coating (amended September 6, 2013), http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-1113.pdf. Accessed September 2021.

Rule 201 Permit to Construct

Rule 201 requires a permit for installation of any equipment which releases air pollutants.[70]

Rule 401–Visible Emissions

This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.[71]

Rule 402 Nuisance Odors

Rule 402 prohibits the discharge of odors that cause injury, detriment, nuisance, or annoyance to a considerable number of people.[72]

Rule 403 Fugitive Dust

Rule 403[73] requires fugitive dust sources to implement Best Available Control Measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. This may include application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour (mph), sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

Rule 1113 Architectural Coatings

Rule 1113[74] requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

70 SCAQMD, "Rule 201: Permit to Construct" (amended December 3, 2004), http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-201.pdf. Accessed September 2021.

71 SCAQMD, "Rule 401: Visible Emissions, http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book. Accessed September 2021.

72 SCAQMD, "Rule 402: Nuisance", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf. Accessed September 2021.

73 SCAQMD, "Rule 403: Fugitive Dust", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf. Accessed September 2021.

74 SCAQMD, "Rule 1113: Architectural Coatings", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-1113.pdf. Accessed September 2021.

Rule 1146.2 Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters

Rule 1146.2[75] requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NOx emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

Rule 1186, PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations

Rule 1186 requires control measures to reduce fugitive dust from paved and unpaved roads in addition to livestock operations.[76]

Regulation XIII – New Source Review (NSR)

The South Coast Air Quality Management District (South Coast AQMD) adopted its New Source Review (NSR) program in October 1976.[77] The current NSR regulation is codified by South Coast AQMD Regulation XIII–New Source Review.

NSR is a preconstruction review required under both federal and State statutes for new and modified sources located in areas that do not meet the Clean Air Act standards for healthy air (nonattainment areas). NSR applies to both individual permits and entire facilities. Any permit that has a net increase in emissions is required to apply BACT (equivalent to federal Lowest Achievable Emission Rate). Facilities with a net increase in emissions are required to offset the emission increase by use of Emission Reduction Credits (ERCs). The regulation provides for the application, eligibility, registration, use and transfer of ERCs. For low emitting facilities, the South Coast AQMD maintains an internal bank that can be used to provide the required offsets. In addition, certain facilities are subject to provisions that require public notice and modeling analysis to determine the downwind impact prior to permit issuance.

Regulation XIV – Toxics and Other Noncriteria Air Pollutants

Regulation XIV[78] sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other noncriteria air pollutants. The following is a list of rules which may apply to the proposed Project:

75 SCAQMD, "Rule 1146.2: Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters," http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-1146.2.pdf. Accessed September 2021.

76 SCAQMD, "Rule 1186: PM10 Emissions From Paved and Unpaved Roads, and Livestock Operations" (amended July 11, 2008), http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1186.pdf. Accessed September 2021.

77 SCAQMD, Regulation XIII – New Source Review. October 2016. http://www.aqmd.gov/home/permits/new-source-review. Accessed September 2021.

78 SCAQMD, Regulation XIV – Toxics and Other Noncompliance Air Pollution. http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-xiv. Accessed September 2021.

Rule 1401 – New Source Review of Toxic Air Contaminants

This rule regulates new or modified facilities to limit cancer and noncancer health risks from facilities located within SCAQMD jurisdiction.

Rule 1402 – Control of Toxic Air Contaminants from Existing Sources

This rule regulates facilities that are already operating in order to limit cancer and noncancer health risks. Rule 1402 incorporates the requirements and methodology of the AB 2588 Air Toxics "Hot Spots" program.

Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities

This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (see **Section 4.8: Hazards and Hazardous Materials**).

Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

SCAQMD Rule 1470[79] applies to stationary compression ignition (CI) engine greater than 50 brake horsepower and sets limits on emissions and operating hours. In general, new stationary emergency standby diesel-fueled engines greater than 50 brake horsepower are not permitted to operate more than 50 hours per year for maintenance and testing.

South Coast Air Quality Management District CEQA Air Quality Handbook

In 1993, the SCAQMD prepared its *CEQA Air Quality Handbook* (CEQA Handbook) to assist local government agencies and consultants in preparing environmental documents for projects subject to CEQA;[80] the SCAQMD is in the process of developing its *Air Quality Analysis Guidance Handbook* (*Guidance Handbook*) to replace the CEQA Handbook. The *Guidance Handbook* describes the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents. Although the Guidance Handbook is still being prepared, the *Guidance Handbook* provides the most up-to-date recommended thresholds of significance in order to determine if a project will have a significant adverse environmental impact. SCAQMD provides additional supplementation information including methodologies for estimating project emissions and mitigation measures that can be implemented to

79 SCAQMD, Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

80 SCAQMD, Air Quality Analysis Guidance Handbook, http://www.aqmd.gov/CEQA/hdbk.html. 2010. Accessed September 2021.

avoid or reduce air quality impacts on the Guidance Handbook website. Although the Governing Board of the SCAQMD has not adopted the *Guidance Handbook* and is in the process of developing the *Guidance Handbook*, the SCAQMD does not, nor does it intend to, supersede a local jurisdiction's CEQA procedures.[81]

Multiple Air Toxics Exposure Study

To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study (MATES IV),[82] conducted between July 2012 and June 2013. The monitoring program measured more than 30 air pollutants including both gases and particulates. The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Basin equates to a background cancer risk of approximately 418 in one million primarily due to diesel exhaust. Subsequent to SCAQMD's risk calculation estimates, the OEHHA updated the methods for estimating cancer risks.[83] The updated method utilizes higher estimates of cancer potency during early life exposures and uses different assumptions for breathing rates and length of residential exposures. However, DPM remains the largest component of air toxics estimated risk.

SCAQMD is in the process of conducting the MATES V study.[84] This would involve the addition of an advanced monitoring network which would include account flight-based measurements, a mobile laboratory, an optical tent, sensor networks, and community engagement.

Southern California Association of Governments (SCAG)

SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS)

SCAG is the metropolitan planning organization (MPO) for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for the discussion of regional issues related to transportation, the economy, community development, and the environment. As the federally-designated MPO for the Southern California region, SCAG is mandated by the federal government to research and develop plans for transportation, hazardous waste management, and air quality. Pursuant to California

81 SCAQMD, "Frequently Asked CEQA Questions," http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/frequently-asked-questions. Accessed September 2021.

82 SCAQMD, *Multiple Air Toxics Exposure Study (MATES-IV) in the South Coast Air Basin,* May 1, 2015, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv. Accessed September 2021.

83 *California Office of Environmental Health Hazard Assessment (OEHHA), Air Toxics Hot Spots Program (February 2015),* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed September 2021.

84 SCAQMD, *MATES V Multiple Air Toxics Exposure Study,* http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v. Accessed September 2021.

Health and Safety Code Section 40460(b),[85] SCAG has the responsibility for preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is also responsible under the CAA for determining conformity of transportation projects, plans, and programs with applicable air quality plans.

With regard to air quality planning, SCAG has prepared and adopted the 2020–2045 RTP/SCS,[86] which includes a SCS that addresses regional development and growth forecasts, including the development of the ITC project. The SCAG 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level. Although the RTP/SCS is not technically an air quality plan, consistency with the RTP/SCS has air quality implications, including the reduction of VMT which reduces air quality emissions.

4.2.4.4 Local Regulations

City

General Plan

California State law requires every city and county to adopt a comprehensive General Plan to guide its future development. The proposed Project is located entirely within the City. The City General Plan[87] includes the following elements: Land Use, Circulation, Safety, Noise, Housing, Open Space, and Conservation.

Land Use Element

The following goals from the Land Use Element[88] of the City General Plan are relevant to air pollutant emissions.

85 California Health and Safety Code, Division 26. Air Resources, PART 3. Air Pollution Control Districts, Chapter 5.5. South Coast Air Quality Management District, ARTICLE 5. Plan, Section 40460(b). Accessed September 2021. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=40460.&lawCode=HSC

86 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, "Chapter 1," https://www.connectsocal.org/Pages/Connect-SoCal-Draft-Plan.aspx. Accessed September 2021.

87 City of Inglewood, Department of Community Development and Housing, General Plan. January 1980

88 City of Inglewood, Department of Community Development and Housing, 1980. Land Use Element of the Inglewood General Plan. January 1980. Amended September 14, 2016.

Circulation Goal: Promote and support adequate public transportation within the City and the region.

Circulation Goal: Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

Conservation Element

The City's General Plan Conservation Element addresses the conservation, development, and use of natural resources.[89] Five specific areas of conservation and/or protection that are identified in the Conservation Element include (1) oil and gas production, (2) water production and provision for domestic use, (3) storm water runoff and wastewater, (4) hazardous waste and solid waste disposal, and (5) air pollution. The Conservation Element notes the following pollution-reducing measures:

- reducing volatile emissions from factories and refineries;
- reducing airborne particulate matter from factories and construction sites;
- reducing numbers of vehicles being driven while increasing the utilization of high occupancy vehicles and alternative transportation;
- requiring improvements to engine efficiency to decrease emissions; and
- increasing the use of clean fuel vehicles.

Environmental Justice Element

The following goals from the Environmental Justice Element[90] of the City General Plan are relevant to air pollutant emissions.

Policy EJ-2.4: Create land use patterns and public amenities that encourage people to walk, bicycle and use public transit.

Policy EJ-2.9: Work with the South Coast Air Quality Management District (SCAQMD), the Los Angeles International Airport (LAX) and other appropriate agencies to monitor and improve air quality in the City of Inglewood.

Policy EJ-2.10: Implement and periodically update the City's Energy and Climate Action Plan to improve air quality and reduce greenhouse gas emissions.

89 City of Inglewood General Plan, "Conservation Element" (1997), General Plan. January 1980.

90 City of Inglewood, Department of Community Development and Housing, 1980. Environmental Justice Element of the Inglewood General Plan. April 2020.

Energy and Climate Action Plan

The City adopted an Energy and Climate Action Plan[91] (ECAP) in 2013 to guide Citywide GHG emissions reduction efforts. The ECAP established four primary compliance paths which projects may choose to adhere to, including: ministerial and exempt project status, implementation of a combination of sustainable development standards, performance-based compliance, or payment of an in-lieu fee. These measures were developed on a points-based system, which were chosen because they have been demonstrated by various studies to directly reduce GHG emissions or support changes in activities that lead to GHG emissions reductions. Each Climate-Ready Development Standard has a point value associated with it that reflects its general effectiveness at reducing GHG emissions. The standards apply to various types of projects, and a qualifier is included denoting which types of projects may implement the standard. Applicants have discretion regarding which measures that they would want their project to comply with; however, for a project to be fully compliant with the goals of the ECAP it must incorporate features meeting the standards sufficient to accrue a total of 20 points. The following two of the five strategies and their related actions included in the ECAP also have the potential for co-benefits of reducing criteria air pollutants and TACs:

- S**trategy 1: Lead by Example with Municipal Government Actions**
  - Accelerate city vehicle fleet replacement
  - Continue commute trip reduction program
  - Planning for electric vehicle infrastructure
- **Strategy 4: Improve Transportation Options and Manage Transportation Demand**
  - Make roadways more efficient
  - Improve transit
  - Improve bicycle facilities
  - Make parking more efficient
  - Reduce commute trips
  - Encourage land use intensification and diversity

91 City of Inglewood, Inglewood Energy and Climate Action Plan, March 2013, https://www.cityofinglewood.org/DocumentCenter/View/148/Inglewood-Energy-and-Climate-Action-Plan-ECAP-Adopted-2013-PDF. Accessed September 2021.

4.2.5 EXISTING CONDITIONS

4.2.5.1 Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and Pacific Ocean), determine the effect of air pollutant emissions on local air quality.

In general, Southern California has a warm, dry Mediterranean climate; hot in the summer and mild in the winter. Temperatures are cooler near the coast and hotter near inland areas. Most of the precipitation occurs as rain during the winter months, although rain showers are common during the summer in higher-elevation desert areas. Average annual precipitation is approximately 19 inches and temperatures reach 90 degrees Fahrenheit 100 days of the year on average. August daily highs average 95 degrees while daily lows average 64 degrees Fahrenheit. January typically exhibits average daily highs of 68 degrees and average daily lows of 43 degrees Fahrenheit. The predominant wind directions are either out of the northwest or southeast. Gusts greater than 15 miles per hour occur infrequently, less than two percent of the time.

Basin climate increases the potential to create air pollution problems. Air quality within the Basin generally rates from fair to poor. Sinking or subsiding air from the Pacific High-Pressure System creates a temperature inversion (known as a subsidence inversion), which acts as a lid to vertical movement of air masses and dispersion of pollutants. The lower bound of this inversion at any given time is known as the "mixing height." Restricted maximum mixing heights are 3,500 feet above sea level or less. Weak summertime pressure gradients suppress winds and further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic (human-made) emissions, combined with strong sunshine, lead to photochemical reactions that create ozone (O_3) in this surface layer. Daytime onshore air flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures and leads to air pollutants being blown out to sea at night and returning to land the following day.

4.2.5.2 Existing Ambient Air Quality

The proposed Project is located within the South Coast Air Basin (Basin) which covers approximately 6,745 square miles and is bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County; the nondesert portions of Los Angeles, Riverside, and San Bernardino counties; and the San Gorgonio Pass area in Riverside County.

The Basin has some of the worst air pollution in the country. The air pollution problems are a consequence of the combination of emissions from the nation's second largest urban area, meteorological conditions unfavorable to the dispersion of those emissions, and mountainous terrain surrounding the Basin that traps pollutants as they are pushed inland with the sea breeze. Southern California also has abundant sunshine, which drives the photochemical reactions that form pollutants such as ozone (O3) and a significant portion of particulate matter with an aerodynamic diameter less than or equal to 2.5 ($PM_{2.5}$).[92]

The City has been ranked in the 8th percentile of cities for the best overall mild weather.[93] Average temperatures in the vicinity range from the mid-60s to mid-70s Fahrenheit to the upper 40s to low 60s Fahrenheit. The warmest periods tend to be from June to October. Winter precipitation usually consists of low-pressure systems dependent up the size and location of the upper-level jet stream. Summer rainfall usually consists of periodic and short-term scattered thunderstorms that are formed by an extension of the North American monsoon pattern that dominates over the southwestern United States.

The SCAQMD maintains a network of monitoring stations within the Basin that monitor air quality and compliance with applicable ambient standards. The nearest air monitoring station which measures CO, NO_2, SO_2, and PM_{10} is located near Los Angeles International Airport (7201 West Westchester Parkway, Southwest Coastal LA County, Station 820), four miles to the west of the proposed Project. The nearest air monitoring station which measures $PM_{2.5}$ is located in central Los Angeles (1630 North Main Street, Central LA, Station 087), ten miles to the northeast of the proposed Project.

Regional Air Quality

The Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone. Pollutant concentrations in the Basin vary with location, season, and time of day. Concentrations of ozone, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Basin and adjacent desert.[94] The worst air pollution conditions throughout the Basin typically occur from June through September.

Attainment Status

California Health and Safety Code section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 4.2-2: South Coast Air Basin Attainment Status (Los Angeles County)** provides a summary of the attainment status of the Los Angeles County portion of the Basin with respect to the federal and State standards. As shown, the Basin is designated under federal or State ambient air quality standards as nonattainment for ozone, PM_{10}, and fine particulate matter $PM_{2.5}$. It is noteworthy to mention that air quality in the Basin has improved substantially over the years, primarily due to the impacts of air quality control programs at the federal, State, and local levels. The ozone and PM levels have fallen

92 SCAQMD, *Final 2016 Air Quality Management Plan* (2016), https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed September 2021.

93 City of Inglewood, "About the City," https://www.cityofinglewood.org/493/About-the-City. Accessed September 2021.

94 South Coast Air Quality Management District, *2017.* Final 2016 Air Quality Management Plan*.* March 2017.

significantly compared to the worst years and are expected to continue to trend downward in the future despite increases in the economy and population in the Basin.[95]

Table 4.2-2
South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	Federal Standards	California Standards
O^3 (1-hour standard)	N/A[a]	Nonattainment
O^3 (8-hour standard)	Nonattainment – Extreme	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Nonattainment (Partial, Los Angeles County)[b]	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Hydrogen Sulfide	N/A	N/A[c]

Notes:
N/A = not applicable
a The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
b Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.
c In 1990, CARB identified vinyl chloride as a TAC and determined that it does not have an identifiable threshold. Therefore, CARB does not monitor or make status designations for this pollutant.
Source: USEPA, The Green Book Nonattainment Areas for Criteria Air Pollutants, https://www.epa.gov/green-book; CARB, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm.

With respect to the State-identified criteria air pollutants (sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride) present in **Table 4.2-2**, the proposed Project would either not use these pollutants in the day to day operations or during construction and therefore would not have emissions of those pollutants (hydrogen sulfide, vinyl chloride, and lead), or such emissions would be accounted for as part of the pollutants estimated in this analysis (visibility reducing particles are associated with particulate matter emissions, and sulfates are associated with SO_2). Vinyl chloride is used in the process of making polyvinyl chloride (PVC) plastic and vinyl products and is primarily emitted from industrial processes.[96] Vinyl chloride would not be emitted directly during operations or during construction; therefore, there would be no project emissions of vinyl chloride. In addition, CARB determined there is not sufficient scientific evidence available to support the identification of a threshold exposure level for vinyl chloride, therefore, CARB does not monitor or make status designations for this pollutant.[97]

95 South Coast Air Quality Management District, *2017.* Final 2016 Air Quality Management Plan. March 2017, p. 1-6.
96 California Air Resources Board, Vinyl Chloride & Health, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed September 2021.
97 California Air Toxics Board, Toxic Air Contaminant Board, Toxic Air Contaminant Identification List, https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed September 2021.

Table 4.2-3: **Air Quality Data Summary** summarizes the most recent three years of data (2017 through 2019) from the nearby air monitoring stations (SCAQMD Station Nos. 091 and 820). The ozone standard was not exceeded. The State annual PM_{10} standard was exceeded in 2018 and the State24-hour PM_{10} standard was exceeded in 2019. The State annual $PM_{2.5}$ standard was exceeded in 2018 and the State24-hour $PM_{2.5}$ standard was exceeded in 2019. No other exceedances were observed at the nearby air monitoring stations in 2017 through 2019.

Table 4.2-3
Air Quality Data Summary (2017–2019)

	Monitoring Data by Year			
Pollutant	***Standard***	***2017***	***2018***	***2019***
Ozone				
Highest 1 Hour Average (ppm)	0.09	0.086	0.074	0.082
Days over State Standard	—	0	0	0
Highest 8 Hour Average (ppm)	0.070	0.070	0.065	0.067
Days over National Standard	—	0	0	0
Days over State Standard	—	0	0	0
Nitrogen Dioxide				
Highest 1 Hour Average (ppm)	0.180/0.100	0.072	0.060	0.057
Days over State Standard	—	0	0	0
Annual Average (ppm)	0.030/0.053	0.009	0.009	0.010
Carbon Monoxide				
Highest 1 Hour Average (ppm)	20.0	2.1	1.8	1.8
Days over State Standard	—	0	0	0
Highest 8 Hour Average (ppm)	9.0	1.6	1.5	1.3
Days over State Standard	—	0	0	0
Particulate Matter (PM_{10})				
Highest 24 Hour Average ($\mu g/m^3$)	50	46	45	**62**
Days over State Standard	—	0	0	2
State Annual Average ($\mu g/m^3$)	20	19.8	**20.5**	19.2
Particulate Matter ($PM_{2.5}$)				
Highest 24 Hour Average ($\mu g/m^3$)	35	27.8	30.5	**43.5**
Days over National Standard	—	0	0	1
State Annual Average ($\mu g/m^3$)	12	11.9	**12.6**	10.9

*Notes: Values in **bold** are in excess of at least one applicable standard.*
Generally, State, and national standards are not to be exceeded more than once per year.
ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.
PM_{10} is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.
Source: South Coast Air Quality Management District, Annual Air Quality Summaries, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year. Accessed September 2021.

4.2.5.3 Adjusted Baseline

The Air Quality analysis assumes the Adjusted Baseline Environmental Setting as described in **Section 4.0**; see **Table 4.0-1** for the details of the Adjusted Baseline. Related to air quality, the changes associated with

the Hollywood Park Specific Plan (HPSP) Adjusted Baseline projects, currently under development and anticipated to be operational prior to construction of the proposed Project, include operational air emissions associated with new uses in the HPSP area.

The HPSP projects in the Adjusted Baseline would emit air pollutants associated with vehicle trips, maintenance operations, energy consumption, etc., from all of its operational land uses. Specifically, vehicle trips associated with activities at the HPSP would take place during 2020 and would have an impact on local and regional air quality. Accordingly, the air pollutant emissions associated with this development within the HPSP area are considered as part of the Adjusted Baseline. No other changes to the existing environmental setting related to air quality would occur under the Adjusted Baseline.

4.2.5.4 Existing Emissions

Implementation of the proposed Project would require the acquisition of a number of full and partial property and air rights acquisitions and easements or leases for construction and operation of the guideway, stations, MSF, and other support facilities included in the proposed Project (See **Section 3.0** for a detailed discussion of the existing land uses that would be demolished as part of the proposed Project). Presently, a variety of commercial, restaurant, and retail uses that exist where the components of the proposed Project would be constructed. These existing uses currently generate air quality emissions from building operation.

Table 4.2-4: Existing Emissions for Existing Uses identifies the existing emissions from the existing uses that would be removed as part of the proposed Project.

Table 4.2-4
Existing Emissions for Existing Uses (lb./day)

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
Area (Consumer Products, Landscaping)	6.77	0.03	<0.01	<0.01	<0.01	<0.01
Energy (Natural Gas)	0.20	1.56	1.85	0.14	0.14	0.01
Motor Vehicles	38.9	1,327	141	55.8	23.6	3.78
Total	**45.9**	**1,329**	**143**	**55.9**	**23.7**	**3.79**

*Source: See **Appendix G.1.***

In addition to mobile emissions for the Adjusted Baseline projects, emissions for existing uses that will be removed have been estimated. This includes mobile, area and energy emissions for existing uses that will be removed.

4.2.5.5 Sensitive Receptors

Within one quarter mile of the proposed Project guideway, stations, and the MSF site, 61 sensitive receptors have been identified as shown in **Figure 4.0-2**.

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB and SCAQMD have identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. Off-site workers within industrial and commercial areas surrounding the proposed Project area are also considered sensitive receptors by the SCAQMD.

4.2.6 THRESHOLDS OF SIGNIFICANCE

The proposed Project would have a significant impact in relation to air quality if it were to:

Threshold AQ-1: **Conflict with or obstruct implementation of the applicable air quality plan.**

Threshold AQ-2: **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.**

Threshold AQ-3: **Expose sensitive receptors to substantial pollutant concentrations.**

The following criteria was used to evaluate air quality impacts:

4.2.6.1 SCAQMD CEQA Air Quality Handbook

Because of the SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies in the SCAQMD's *CEQA Air Quality Handbook*[98] are used in evaluating project impacts for construction, operations, and air toxics.[99]

98 SCAQMD, Air Quality Analysis Guidance Handbook, http://www.aqmd.gov/CEQA/hdbk.html. Accessed September 2021.

99 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, March 2015, http://www.aqmd.gov/ceqa/hdbk.html. Accessed September 2021.

Daily Emissions Thresholds

SCAQMD has identified thresholds to determine the significance of regional air quality emissions for construction activities and project operation, as shown in **Table 4.2-5: Mass Daily Emissions Thresholds.**

Construction Emissions

In addition to the mass daily thresholds, a project would result in a significant construction air quality impact if the Project exceeds the concentration significance thresholds set forth in **Table 4.2-6: Ambient Air Quality Significance Thresholds for Criteria Pollutants.** Per SCAQMD guidance, the evaluated concentrations of CO, NO_2, and SO_2 includes both the project contribution plus background concentrations. The total concentration is then compared to the significance thresholds. For CO, NO_2, and SO_2, these significance thresholds are reflective of the CAAQS and NAAQS. Background concentrations were based on existing air monitoring stations near the proposed Project and represent existing air emissions sources within the Basin. Per SCAQMD guidance, the Project contribution of PM_{10} and $PM_{2.5}$ is compared to the significance thresholds without adding background concentrations.

Table 4.2-5
Mass Daily Emissions Thresholds

Pollutant	Construction	Operation
	Significant Threshold (pounds/day)	
Volatile organic compounds (VOCs)	55	55
Nitrogen dioxide (NOx)	100	55
Carbon monoxide (CO)	550	550
Sulfur dioxide (SOx)	150	150
Respirable particulate matter (PM_{10})	150	150
Fine particulate matter ($PM_{2.5}$)	55	55

Source: South Coast Air Quality Management District, "SCAQMD Air Quality Significance Thresholds" (last revised March 2015).

Operational Emissions

In addition to the mass daily thresholds above, a project would normally have a significant impact on air quality from project operations if any of the following would occur:

- Operational emissions were to exceed 10 tons per year of VOCs or any of the daily thresholds presented above in **Table 4.2-5** (as reprinted from the CEQA Air Quality Handbook):[100]
- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
  - The 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
  - 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.

Table 4.2-6
Ambient Air Quality Significance Thresholds for Criteria Pollutants

Pollutant	Averaging Period	Pollutant Concentration Threshold
CO	1-hour /8-hour	SCAQMD is in attainment (federal and State); project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO_2	1-hour	SCAQMD is in attainment (federal and state); project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm (state)
	Annual	0.03 ppm (state) and 0.0534 ppm (federal)
PM_{10}	24-hour	10.4 µg/m^3 (construction) and 2.5 µg/m^3 (operation)
	Annual	1.0 µg/m^3 (construction and operation)
$PM_{2.5}$	24-hour	10.4 µg/m^3 (construction) and 2.5 µg/m^3 (operation)
SO_2	1-hour	0.25 ppm (state) and 0.075 ppm (federal)
	24-hour	0.04 ppm (state)
Lead	30-day Average	1.5 µg/m^3 (state)
	Rolling 3-month Average	0.15 µg/m^3 (federal)

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, March 2015, http://www.aqmd.gov/ceqa/hdbk.html. Accessed September 2021.

Health Risk Assessment (Toxic Air Contaminants)

Per SCAQMD, a project would result in a significant health impact if the carcinogenic or toxic air contaminants individually or cumulatively are equal to or exceed the maximum individual cancer risk of ten in one million persons or a chronic and acute hazard index of 1.0, or the cancer burden of 0.5 excess cancer cases (in areas greater than or equal to one in one million).

101 SCAQMD, Air Quality Analysis Guidance Handbook, http://www.aqmd.gov/CEQA/hdbk.html. Accessed September 2021.101 SCAQMD, Final Air Quality Management Plan (AQMP*).* Approved March 3, 2017. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed September 2021.

4.2.6.2 Consistency with Applicable Plans and Policies

The consistency analysis addresses consistency with the SCAQMD's AQMP,[101] the 2020-2045 SCAG RTP/SCS,[102] and policies included within the City's General Plan[103] and ECAP.[104]

4.2.7 IMPACT ANALYSIS FOR THE PROPOSED PROJECT

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

The proposed Project includes ITC Design Standards and Guidelines (Design Guidelines) and a Construction Commitment Program (CCP) as described in **Section 3.0: Project Description**. The CCP addresses temporary effects during construction of the proposed Project. The Guidelines describe the design features of the proposed Project.

4.2.7.1 Project Design Features

The proposed Project includes the following features that address air quality emissions during construction of the ATS:

PDF AQ-1 Construction Air Quality Program

At a minimum, use equipment that meets the U.S. Environmental Protection Agency (USEPA)'s Final Tier 4 emissions standards for off-road diesel-powered construction equipment with 50 horsepower (hp) or greater, for all phases of construction activity, unless it can be demonstrated to the City Planning Division with substantial evidence that such equipment is not available. To ensure that Final Tier 4 construction equipment or better shall be used during the proposed Project's construction, the City shall include this requirement in applicable bid documents, purchase orders, and contracts. The City shall also require periodic reporting and provision of written construction documents by construction contractor(s) and conduct regular inspections to the maximum extent feasible to ensure and enforce compliance.

Such equipment will be outfitted with Best Available Control Technology devices including a California Air Resources Board (CARB)-certified Level 3 Diesel Particulate Filters (DPF). Level 3 DPF are capable of achieving at least 85 percent reduction in particulate matter emissions. Any emissions control device used

101 SCAQMD, Final Air Quality Management Plan (AQMP*).* Approved March 3, 2017. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed September 2021.

102 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Final Plan*,* https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx, Accessed September 2021.

103 City of Inglewood, *Department of Community Development and Housing, General Plan.* January 1980

104 City of Inglewood, Inglewood Energy and Climate Action Plan*,* March 2013, https://www.cityofinglewood.org/DocumentCenter/View/148/Inglewood-Energy-and-Climate-Action-Plan-ECAP-Adopted-2013-PDF. Accessed September 2021.

by the contractor shall achieve emissions reductions that are no less than what could be achieved by Final Tier 4 emissions standards for a similarly sized engine, as defined by the CARB's regulations. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground disturbing and construction activities. The proposed Project representative will make available to the lead agency and Southern California Air Quality Management District (SCAQMD) a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, which will be used during construction. The inventory will include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each unit's certified tier specification, best available control technology (BACT) documentation, and CARB or SCAQMD operating permit shall be maintained on site at the time of mobilization for each applicable piece of construction equipment.

If any of the following circumstances listed below exist and the Contractor provides written documentation consistent with project contract requirements, the Contractor shall submit an Alternative Compliance Plan that identifies operational changes or other strategies that can reduce a comparable level of NOx emissions as Tier 4-certified engines during construction activities.

- The Contractor does not have the required type of off-road construction equipment within its current available inventory as to a particular vehicle or equipment by leasing or short-term rent, and the Contractor has attempted in good faith and with due diligence to lease or short-term rent the equipment or vehicle, but the equipment or vehicle is not available for lease or short-term rent within 120 miles of the Project area, and the Contractor has submitted documentation to the City showing that the requirements of this exception provision apply.
- The Contractor has been awarded funding by SCAQMD or another agency that would provide some or all of the cost to retrofit, repower, or purchase a piece of equipment or vehicle, but the funding has not yet been provided due to circumstances beyond the Contractor's control, and the Contractor has attempted in good faith and with due diligence to lease or short-term rent the equipment or vehicle that would comply, but the equipment or vehicle is not available for lease or short-term rent within 120 miles of the Project area, and the Contractor has submitted documentation to the City showing that the requirements of this exception provision apply.
- Contractor has ordered equipment or vehicle to be used on the construction project in compliance at least 60 days before that equipment or vehicle is needed at the Project alignment, but that equipment or vehicle has not yet arrived due to circumstances beyond the Contractor's control, and the Contractor has attempted in good faith and with due diligence to lease or short-term rent the equipment or vehicle that would comply, but the equipment or vehicle is not available for lease or short-term rent within 120 miles of the Project area, and the Contractor has submitted documentation to the City showing that the requirements of this exception provision apply.
- Construction-related diesel equipment or vehicle will be used on the Project for fewer than 20 calendar days per calendar year. The Contractor shall not consecutively use different equipment or

vehicles that perform the same or a substantially similar function in an attempt to use this exception to circumvent the intent of this measure.

- Documentation of good faith efforts and due diligence regarding the previous exceptions shall include written record(s) of inquiries (i.e., phone logs) to at least three leasing/rental companies that provide construction on-road trucks and off-road equipment, documenting the availability/unavailability of the required types of truck/equipment. The City will, from time-to-time, conduct independent audit of the availability of such vehicles and equipment for lease/rent within a 120-mile radius of the Project area, which may be used in reviewing the acceptability of the Contractor's good faith efforts and due diligence.
- Equipment such as concrete/industrial saws, pumps, aerial lifts, light stands, air compressors, and forklifts shall be electric or alternative-fueled (i.e., nondiesel). Pole power shall be utilized to the maximum extent feasible in lieu of generators. If stationary construction equipment, such as diesel-powered generators, must be operated continuously, such equipment must be Final Tier 4 construction equipment or better and located at least 100 feet from air quality sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.
- At a minimum, require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year trucks (e.g., material delivery trucks and soil import/export with a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet CARB's 2010 engine emissions standards at 0.01 g/hp-hour of particulate matter and 0.20 g/hp-hour of NOx emissions or newer, cleaner trucks, unless the Contractor provides written documentation consistent with project contract requirements the circumstances exist as described above and the Contractor submits the Plan. Operators shall maintain records of all trucks associated with Project construction to document that each truck used meets these emission standards. The City shall include this requirement in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with Project construction to document that each truck used meets these emission standards and make the records available for inspection.
- Require the use of electric or alternatively fueled (e.g., natural gas) sweepers with high-efficiency particulate air (HEPA) filters.
- A publicly visible sign shall be posted with the Community Affairs Liaison's contact information to contact regarding dust complaints. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
- All roadways, driveways, sidewalks, etc., being installed as part of the Project should be completed as soon as practicable; in addition, building pads should be laid as soon as practicable after grading.
- To the extent feasible, allow construction employees to commute during off-peak hours.
- Make access available for on-site lunch trucks during construction, as feasible, to minimize off-site construction employee vehicle trips.
- Every effort shall be made to utilize grid-based electric power at any construction site, where feasible.

- Contractors shall maintain and operate construction equipment to minimize exhaust emissions. All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications and documentation demonstrating proper maintenance, in accordance with the manufacturer's specifications, shall be maintained on site. Tampering with construction equipment to increase horsepower or to defeat emission control devices must be prohibited.
- Require in all applicable bid documents, purchase orders, and contracts of the requirement to notify all construction vendors, contractors, and/or haul truck operators that vehicle and construction equipment idling time will be limited to no longer than five minutes, consistent with the CARB's policy. For any idling that is expected to take longer than five minutes, the engine should be shut off. Notify construction vendors, contractors, and/or haul truck operators of these idling requirements at the time that the purchase order is issued and again when vehicles enter the Project area. To further ensure that drivers understand the vehicle idling requirement, post signs at the proposed Project entry gates and throughout the Project alignment, where appropriate, stating that idling longer than five minutes is not permitted.

The following analysis addresses consistency of the proposed Project with applicable plans and policies that regulate air quality. In particular, the analysis addresses consistency with SCAQMD's AQMP, which as discussed above, is an air quality plan that includes strategies for achieving attainment of applicable ozone, PM_{10}, and $PM_{2.5}$ standards. The analysis also includes consistency with SCAG's 2020-2045 RTP/SCS which establishes strategies for achieving improvements in air quality. In addition, consistency with the air quality related policies in the City General Plan Land Use Element, Conservation, and Environmental Justices are also addressed. Finally, this analysis addresses consistency with the City's ECAP, which includes strategies to mitigate the City's impacts on air quality and climate change.

2016 Air Quality Management Plan

As discussed above, SCAQMD has adopted a series of AQMPs to lead the Basin into compliance with several criteria air pollutant standards and other federal requirements, while taking into account construction and operational emissions associated with population and economic growth projections provided by SCAG's RTP/SCS.[105]

The current AQMP is the Final 2016 Air Quality Management Plan (2016 AQMP)[106] and is the regional blueprint for achieving air quality standards in the South Coast Air Basin, an area that includes Orange County and the nondesert portions of Los Angeles, Riverside and San Bernardino counties.

105 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, "Chapter 1," https://www.connectsocal.org/Pages/Connect-SoCal-Draft-Plan.aspx, Accessed September 2021.

106 South Coast Air Quality Management District, Final 2016 Air Quality Management Plan, March 2017.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, includes available, proven, and cost-effective strategies, and seeks to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and incentives that encourage the accelerated transition to cleaner vehicles, and the modernization of buildings and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy.

SCAQMD recommends that, when determining whether a project is consistent with the relevant AQMPs, the lead agency should assess whether the project would directly obstruct implementation of the plans by impeding SCAQMD's efforts to achieve attainment with respect to any criteria air pollutant for which it is currently not in attainment of the NAAQS and CAAQS (e.g., ozone, PM_{10}, and $PM_{2.5}$) and whether it is consistent with the demographic and economic assumptions (typically land use related, such as employment and population/residential units) upon which the plan is based.[107] SCAQMD guidance indicates that projects whose growth is included in the projections used in the formulation of the 2016 AQMP are considered to be consistent with the plan and would not interfere with its attainment.[108]

Construction

Control Strategies

During construction, the proposed Project would comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time, and with SCAQMD's regulations such as Rule 403[109] for controlling fugitive dust and Rule 1113[110] for controlling VOC emissions from architectural coatings. Furthermore, the proposed Project would use vehicles from vendors that comply with fleet rules to reduce on-road truck emissions under CARB's Truck and Bus regulation.[111] Compliance with these measures and requirements would be consistent with and meet or exceed the 2016 AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

Even though the proposed Project would be consistent with local and State construction regulations, and other voluntary measures designed to reduce nonattainment pollutants, regional emissions during

107 South Coast Air Quality Management District, Air Quality Analysis Handbook, pp. 12-2, 12-3, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook. Accessed September 2021.
108 South Coast Air Quality Management District, 1993. CEQA Air Quality Handbook, p. 12-1. November 1993
109 SCAQMD, "Rule 403: Fugitive Dust", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf. Accessed September 2021.
110 SCAQMD, "Rule 1113: Architectural Coatings", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-1113.pdf. Accessed September 2021.
111 California Air Resources Board, Truck and Bus Regulation. https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation/about. Accessed September 2021.

construction would exceed the significance threshold for NOx prior to application of mitigation. Specifically, as shown in **Table 4.2-8**, emissions during construction for 2024 (146 lbs./day), 2025 (128 lbs./day), and 2026 (118 lbs./day) would exceed the SCAQMD's mass threshold of 100 lbs./day. Other criteria pollutants are not predicted to exceed regional mass emission thresholds during construction.

Growth Strategies

The proposed Project would result in an increase in short-term employment compared to existing conditions (see **Section 4.11: Population, Employment, and Housing**). Although the proposed Project would generate construction jobs during the construction process, construction-related jobs generated would likely be filled by employees within the construction industry within the City and the greater Los Angeles County region. Construction industry jobs generally have no regular place of business, as construction workers commute to job sites throughout a given region, which may change several times a year. Moreover, these jobs would be temporary in nature. Therefore, the construction jobs generated by the proposed Project would not conflict with the long-term employment or population projections upon which the 2016 AQMP is based.

However, as the proposed Project would exceed the NOx SCAQMD threshold, construction impacts would be potentially significant.

Operation

Transportation Strategies

The 2016 AQMP includes land use and transportation strategies from the SCAG RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The majority of the transportation strategies are to be implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, although some can be furthered by individual development projects.

The 2016 AQMP forecasts emissions inventories up to the year 2031 ''with growth'' through a detailed consultation process with SCAG.[112] The region is projected to see a 12 percent growth in population, 16 percent growth in housing units, 23 percent growth in employment, and 8 percent growth in vehicle miles traveled between 2012 and 2031.

The proposed Project is a transit system that spans the length of approximately 1.6 miles and would be located near existing residential, office, retail, and commercial land uses which generate vehicle trips on local roadways within the City. The proposed Project would provide direct connections between the Metro K Line, and other transit providers as well as the City's major activity centers, such as The Forum, the LASED

112 South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan,* March 2017. P. 3-10.

and HPSP including SoFi stadium, and IBEC. Implementation of the proposed Project would provide an alternate mode of transportation within the City and reduce VMT.

As further discussed in **Section 4.12**, in 2027 the proposed Project would have a daily weekday ridership of 3,574 passengers on a non-event day, and a daily weekday ridership of 29,280 passengers on an NFL event day. Moreover in 2045 the proposed Project would have a daily weekday ridership of 4,462 passengers on a non-event day, and a daily weekday ridership of 34,650 passengers on an NFL event day.

As these increases in public transit ridership reduce potential vehicle trips and air quality emissions, VMT estimates for the six operational scenarios are derived from travel demand modeling in the Transportation Study (see **Appendix O**) and are further discussed in **Section 4.12**. The proposed Project would reduce daily and annual VMT compared to a no-Project scenario. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce VMT accordingly when compared to the baseline scenarios without the proposed Project.

The proposed Project will help manage and support the City's projected growth by providing transit within a safe and accessible walking distance to thousands of new residents, housing units and jobs. The proposed Project's connection from the City's new housing and employment centers, and sports and entertainment venues, to the Metro K Line and larger regional and State rail system will result in significant benefits for both the City and southern California region.

Growth Strategies

As noted, the 2016 AQMP indicates that the region is projected to see a 12 percent growth in population, 16 percent growth in housing units, and 23 percent growth in employment.[113] According to SCAG's 2020-2045 RTP/SCS, approximately 8,389,000 jobs were available in 2016 across industries in the region and the number of jobs available will increase to 10,050,000 by 2045, an increase of approximately 0.62 percent annually in jobs.[114] Similarly, SCAG projects that the population in the region will increase from approximately 18,832,418 in 2016 to 22,507,188 in 2045, resulting in an increase of approximately 0.61 percent annually.

As discussed previously, implementation of the proposed Project would require the acquisition of a number of full and partial property and air rights acquisitions and easements or leases for construction and operation of the guideway, stations, MSF, and other support facilities included in the proposed Project. As such, the proposed Project would result in a reduction of jobs from existing uses. However, the

113 South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan,* March 2017. P. 3-10.

114 SCAG. Draft 2020-2045 Connect SoCal Demographics And Growth Forecast. https://www.connectsocal.org/Documents/Draft/dConnectSoCal_Demographics-And-Growth-Forecast.pdf. Accessed September 2021.

reduction of jobs at existing commercial and retail uses to accommodate the proposed Project would not result in a reduction in jobs in the local job market. Other ongoing and proposed developments and construction in downtown Inglewood and the nearby area, such as the HPSP and the LASED, which are both adjacent to the proposed Project, would provide additional job and employment opportunities.

An adequate workforce exists and is projected to remain in existence, creating capacity to meet the employment needs of the proposed Project during operation. Further, with the current development of new employment opportunities in the City as well as the region, displacement of any existing workers can be absorbed. Therefore, this growth would not conflict with the 2016 AQMP.

As such, operation of the proposed Project would not conflict with the 2016 AQMP and impacts would be less than significant.

2020-2045 RTP/SCS

SCAG has prepared and adopted the 2020–2045 RTP/SCS,[115] which includes an SCS that addresses regional development and growth forecasts. The SCAG 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level. Although the RTP/SCS is not technically an air quality plan, consistency with the RTP/SCS has air quality implications, including the reduction of VMT which reduces air quality emissions.

Currently, the City contains roughly 8,900 housing units and 14,414 employees within one half mile of the proposed Project. By 2040, these areas are projected to increase to roughly 12,875 households, and 38,326 employees.[116] These increases represent a growth rate of approximately 45 percent in households and 166 percent in employment. In comparison to the SCAG region, these projections translate into the City (within a ½ mile of the proposed Project) experiencing almost twice as much growth rate in housing, and more than seven times as much growth rate in employment by 2040.

As part of its vision, the 2020-2045 RTP/SCS includes Connect SoCal;[117] Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation

115 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Final Plan*,* https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx. Accessed September 2021.

116 City if Inglewood, *Transit and Intercity Rail Program (TIRCP) Application for the City of Inglewood Transit Connector Project,* January 16, 2020.

117 Southern California Association of Governments (SCAG), *Connect SoCal,* The 2020-2045 Regional Transportation Plan/Sustainable Community Strategy of the Southern California Association of Governments, https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx. Accessed September 2021.

networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal 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. To augment Connect SoCal's Core Vision, Connect SoCal includes new initiatives at the intersection of land use, transportation, and technology to close the gap and reach our greenhouse gas reduction goals. As part of the planning vision, Connect SoCal looks to complete "last mile" mobility as part of its sustainability goals, Connect SoCal builds upon with regional initiatives that link the built environment and transportation system with policies, projects and programs that strengthen and enhance each other beyond what each would accomplish in isolation.[118]

As part of the state's mandate to reduce per-capita GHG emissions from automobiles and light trucks, Connect SoCal presents strategies and tools that are consistent with local jurisdictions' land use policies and incorporate best practices for achieving the state-mandated reductions in GHG emissions at the regional level through reduced per-capita vehicle miles traveled. These strategies identify how the SCAG region can implement Connect SoCal and achieve related GHG reductions. SCAG works to support local jurisdictions and partnerships by identifying ways to implement the SCS in a way that fits the vision and needs of each local community.

The following Connect SoCal strategies are intended to be supportive of implementing the regional SCS and are applicable to the proposed Project:

Focus Growth Near Destinations & Mobility Options

- Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets.
- Encourage design and transportation options that reduce the reliance on and number of solo car trips.

Support Implementation of Sustainability Policies

- Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions.

As noted previously, the proposed Project's is approximately 1.6 miles in length and would be located near existing residential, office, retail, and commercial land uses which generate vehicle trips on local roadways within the City. The proposed Project would provide direct connections between the Metro K Line, and other transit providers as well as the City's major activity centers, such as The Forum, the LASED and HPSP

118 Southern California Association of Governments (SCAG), *Connect SoCal,* The 2020-2045 Regional Transportation Plan/Sustainable Community Strategy of the Southern California Association of Governments, p. 4 https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx. Accessed September 2021.

including SoFi stadium, and IBEC. Implementation of the proposed Project would provide an alternate mode of transportation within the City and decrease VMTs.

The 2020-2045 RTP/SCS states that expanding the transit network is central to the region's plan for meeting mobility and sustainability goals while continuing to grow the regional economy.[119] The proposed Project provides connection to the Metro K Line and achieves the last mile/first mile goals of the 2020-2045 RTP/SCS. Further, the proposed Project is consistent with and assisting in achieving Connect SoCal strategies and incorporates best practices for achieving the state-mandated reductions in GHG emissions at the regional level through reduced per-capita VMT.

As such, the proposed Project would not conflict with the 2020–2045 RTP/SCS and impacts would be less than significant.

Inglewood General Plan

The City General Plan includes the following elements: Land Use, Circulation, Safety, Noise, Housing, Open Space, and Conservation.

Land Use Element

The following goals from the Land Use Element[120] of the City General Plan are relevant to air pollutant emissions.

Circulation Goal: Promote and support adequate public transportation within the City and the region.

Circulation Goal: Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

Conservation Element

The City's General Plan Conservation Element addresses the conservation, development, and use of natural resources.[121] Five specific areas of conservation and/or protection that are identified in the Conservation Element include (1) oil and gas production, (2) water production and provision for domestic

119 Southern California Association of Governments (SCAG), Connect SoCal, The 2020-2045 Regional Transportation Plan/Sustainable Community Strategy of the Southern California Association of Governments, Chapter 3. https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx, Accessed September 2021.

120 City of Inglewood, Department of Community Development and Housing, 1980. Land Use Element of the Inglewood General Plan. January 1980. Amended September 14, 2016.

121 City of Inglewood General Plan, "Conservation Element" (1997), General Plan. January 1980.

use, (3) storm water runoff and waste water, (4) hazardous waste and solid waste disposal, and (5) air pollution. [122] The Conservation Element notes the following pollution-reducing measures:

- Reducing airborne particulate matter from factories and construction sites;
- Reducing numbers of vehicles being driven while increasing the utilization of high occupancy vehicles and alternative transportation;
- Requiring improvements to engine efficiency to decrease emissions; and
- Increasing the use of clean fuel vehicles.

Environmental Justice Element

The following goals from the Environmental Justice Element[123] of the City General Plan are relevant to air pollutant emissions.

Policy EJ-2.4: Create land use patterns and public amenities that encourage people to walk, bicycle and use public transit.

Policy EJ-2.9: Work with the South Coast Air Quality Management District (SCAQMD), the Los Angeles International Airport (LAX) and other appropriate agencies to monitor and improve air quality in the City of Inglewood.

Policy EJ-2.10: Implement and periodically update the City's Energy and Climate Action Plan to improve air quality and reduce greenhouse gas emissions.

The proposed Project would comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time, and with SCAQMD's regulations such as Rule 403[124] for controlling fugitive dust and Rule 1113[125] for controlling VOC emissions from architectural coatings. Furthermore, the proposed Project would comply with fleet rules to reduce on-road truck emissions under CARBs Truck and Bus regulation.[126] Compliance with these measures and requirements would be

122 City of Inglewood General Plan, "Conservation Element" (1997), General Plan. January 1980.
123 City of Inglewood, Department of Community Development and Housing, 1980. Environmental Justice Element of the Inglewood General Plan. April 2020.
124 SCAQMD, "Rule 403: Fugitive Dust", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf. Accessed September 2021.
125 SCAQMD, "Rule 1113: Architectural Coatings", http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-1113.pdf. Accessed September 2021.
126 California Air Resources Board, Truck and Bus Regulation. https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation/about. Accessed September 2021.

consistent with and meet or exceed the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

Once in operation, the proposed Project would result in a decrease in emissions for criteria pollutants (see **Impact AQ-2**). This would include reductions in 2027 for VOC of 10.8 lbs./day, CO of 378.0 lbs./day, NOx of 77.0 lbs./day, $PM_{2.5}$ of 28.6 lbs./day, PM_{10} of 12.0 lbs./day and SO_2 of 1.63 lbs./day. As discussed previously, the proposed Project would provide direct connections between the Metro K Line, and other transit providers as well as the City's major activity centers, such as the Forum, the LASED and HPSP including SoFi stadium, and IBEC. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce per-capita VMT.

For these reasons, the proposed Project would not conflict with Inglewood General Plan policies related to air quality and impacts would be less than significant.

Inglewood Energy and Climate Action Plan

As described above, the City's ECAP includes strategies to mitigate the City's impacts on air quality and climate change. While these strategies are primarily directed towards GHG emission reductions, the measures in the City's ECAP would also achieve co-benefits of reducing criteria air pollutants and TACs. The strategies that apply to the proposed Project include:

- **Strategy 1: Lead by Example with Municipal Government Actions**
  - Continue commute trip reduction program
- **Strategy 4: Improve Transportation Options and Manage Transportation Demand**
  - Make roadways more efficient
  - Improve transit
  - Make parking more efficient
  - Reduce commute trips

As discussed, the proposed Project would provide direct connections between regional transit provided by Metro, specifically at the Metro K Line, and other transit providers as well as the City's major activity centers, such as the Forum, the LASED and HPSP including SoFi stadium, and IBEC. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce per-capita VMT. The proposed Project would be consistent with Strategy 1 as City would provide local transit that would connect to regional transit thereby allowing for commuters to reduce vehicle travel. The proposed Project would be consistent with Strategy 4 in that roadway improvements would provide for efficient travel along

Manchester and Boulevard and Prairie Avenue, would improve transit by connecting the Downtown area with other employment and entertainment areas of the City, and would provide efficient parking within the Downtown area nearby transit options.

The proposed Project would be consistent with the City ECAP, and impacts would be less than significant.

Summary

Construction

The proposed Project would comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time, and with SCAQMD and CARB regulations. Compliance with these measures and requirements would be consistent with and meet or exceed the 2016 AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

Even though the proposed Project would be consistent with applicable local and State construction regulations, and other voluntary measures designed to reduce nonattainment pollutants, regional emissions during construction of the proposed Project would exceed the significance threshold for NOx, an ozone precursor. Other criteria pollutants are not predicted to exceed regional mass emission thresholds during construction. However, as the proposed Project would exceed the NOx SCAQMD threshold during construction, impacts would be potentially significant.

Operation

The proposed Project will help manage and support the City's projected growth by providing transit within a safe and accessible walking distance to thousands of new residents, housing units and jobs. The proposed Project's connection from the City's new housing and employment centers, and sports and entertainment venues, to the Metro K Line and larger regional and State rail system will result in significant air quality benefits for both the City and southern California region.

The proposed Project provides a transit connection and is consistent with the last mile/first mile goals of the 2020-2045 RTP/SCS.[127] The proposed Project would provide direct connections between the Metro K Line, and other transit providers as well as the City's major activity centers, such as The Forum, the LASED and HPSP, and IBEC; as such, implementation of the proposed Project would provide an alternate mode of transportation within the City and decrease vehicle ridership and thereby VMT. The proposed Project is

127 Southern California Association of Governments (SCAG), *Connect SoCal,* The 2020-2045 Regional Transportation Plan/Sustainable Community Strategy of the Southern California Association of Governments, *Chapter 3.* https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx, Accessed September 2021.

consistent with and assisting in achieving Connect SoCal strategies and incorporate best practices for achieving the State-mandated reductions in GHG emissions at the regional level through reduced per-capita VMT.

Once in operation, the proposed Project would result in a decrease in emissions for criteria pollutants (see **Impact AQ-2**). This would include reductions in 2027 for VOC of 10.8 lbs./day, CO of 378.0 lbs./day, NOx of 77.0 lbs./day, $PM_{2.5}$ of 28.6 lbs./day, PM_{10} of 12.0 lbs./day and SO_2 of 1.63 lbs./day.

For these reasons, the proposed Project would not conflict with the goals and policies of relevant regional plans or the Inglewood General Plan policies related to air quality.

Mitigation Measures

MM AQ-1: PDF AQ-1, Construction Air Quality Program, shall be implemented during construction of the ITC Project.

As described above, the proposed Project's CCP includes **PDF AQ-1** which would reduce air quality emissions during construction of the proposed Project. **Mitigation Measure MM AQ-1** incorporates **PDF AQ-1** into the post-mitigated modeling for construction of the proposed Project.

Level of Significance after Mitigation

Construction

As shown in **Table 4.2-14**, below, regional emissions during construction of the proposed Project would not exceed the significance threshold for NOx after implementation of **MM AQ-1**

Impacts would be less than significant with mitigation.

Operation

As previously explained, the proposed Project is consistent with the 2016 AQMP, the 2020-2045 RTP/SCS, and the City's General Plan and ECAP. Impacts relative to the operation of the proposed Project with these plans is less than significant.

Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

The region is designated as a nonattainment area for several pollutants, including O_3, PM_{10}, and $PM_{2.5}$. Construction and operation of the Project would result in direct and indirect impacts that could cumulatively affect air quality for nonattainment pollutants, namely PM_{10} and $PM_{2.5}$.

A cumulatively considerable increase in emissions would occur if the proposed Project's impacts substantially contributed to air quality violations when considering other projects that may undertake construction activities at the same time. SCAQMD recommends that any construction-related emissions and operational emissions from individual development projects that exceed the project-specific mass daily emissions thresholds identified above in **Table 4.2-5** also be considered cumulatively considerable.[128]

Construction

Prior to construction of the proposed Project, reconstruction of the existing Vons store proposed for demolition to accommodate construction of the MSF is planned on the corner of Manchester Boulevard and Hillcrest Boulevard. This proposed replacement Vons store would include amenities similar to the existing store, including a pharmacy and bank branch. **Table 4.2-7: Daily Unmitigated Construction Emissions for Vons Replacement** below shows the construction emissions that would occur during development of the Vons store replacement prior to construction of the proposed Project.

Table 4.2-7
Daily Unmitigated Construction Emissions for Vons Replacement

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
	pounds/day					
Maximum	6.51	16.35	15.22	1.30	0.78	0.04
SCAQMD Mass Daily Threshold	75	550	100	150	55	150
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

*Refer to **Appendix G.2**.*
Notes: CO = carbon monoxide; NOx = nitrogen oxides; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; SOx = sulfur oxides; VOC = volatile organic compounds.

128 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.

As shown in **Table 4.2-7**, construction of the Vons store replacement would not exceed regional VOC, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$ concentration thresholds. Moreover, these emissions would be temporary and would occur prior to construction of the proposed ITC Project.

Construction of the proposed ITC Project has the potential to temporarily emit criteria air pollutant emissions through the use of heavy-duty construction equipment, and through vehicle trips generated from workers and haul trucks traveling to and from the proposed Project. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NOx and PM emissions (i.e., PM_{10} and $PM_{2.5}$), would result from the use of diesel powered on- and off-road vehicles and equipment.

Intermittent (short-term) Construction Emissions Analysis

Intermittent (short-term) construction emissions that occur from construction of the proposed Project were evaluated for each construction year (2024 through 2027). The air quality analysis focuses on maximum daily emissions from construction activities (mobile, area, stationary, and fugitive sources) and compares the emission estimates to thresholds of significance identified by the SCAQMD and based on the SCAQMD *Air Quality Handbook.*[129]

Table 4.2-8: Daily Unmitigated Construction Emissions for Proposed Project shows the estimated daily unmitigated emissions for construction related emissions (including combustion engine and fugitive dust emissions) for the proposed Project. The grand total construction emissions as well as the contribution from employee vehicle trips, pickup/delivery trucks, haul trucks, and off-road equipment are presented. The off-road equipment represents the largest contribution to the total construction emissions. The daily unmitigated NOx construction emissions could potentially exceed the SCAQMD thresholds of significance during 2024 through 2026.

As shown on **Table 4.2-8**, daily emissions for criteria pollutants during construction would exceed significance thresholds for NOx (100 lbs./day) in 2024 (146 lbs./day,) 2025 (128 lbs./day), and 2026 (118 lbs./day) prior to the application of PDF AQ-1. As such, proposed Project construction impacts for NOx emissions would be potentially significant. Based on SCAQMD's policy, this would be a cumulatively considerable increase in emissions that could increase future exceedances of ozone, a nonattainment pollutant. For all other criteria pollutants, the construction impact would be less than significant.

129 South Coast Air Quality Management District, CEQA Air Quality Handbook, http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed September 2021.

Table 4.2-8
Daily Unmitigated Construction Emissions for Proposed Project

Construction Year	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
	pounds/day					
Grand Total						
2024	14.7	227	**146**	8.01	5.72	0.59
2025	13.0	196	**128**	7.70	5.23	0.61
2026	11.1	205	**118**	7.77	5.00	0.51
2027	0.41	23.1	7.22	0.60	0.28	0.03
Significance Thresholds	75	550	100	150	55	150
Employee Vehicles						
2024	0.63	19.3	1.73	1.19	0.50	0.07
2025	0.54	16.7	1.42	1.09	0.45	0.06
2026	0.79	24.1	1.98	1.66	0.69	0.09
2027	0.12	3.52	0.28	0.25	0.10	0.01
Pickup/Delivery Trucks						
2024	0.33	8.06	3.82	0.80	0.35	0.05
2025	0.41	9.62	4.48	1.05	0.46	0.07
2026	0.58	15.0	6.88	1.80	0.78	0.11
2027	0.10	2.74	1.02	0.29	0.13	0.02
Haul Trucks						
2024	0.11	0.77	13.4	1.40	0.63	0.08
2025	0.12	0.94	16.3	1.71	0.77	0.10
2026	0.07	0.51	8.89	0.94	0.42	0.05
2027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Off-road Equipment						
2024	13.6	199	**127**	4.61	4.24	0.38
2025	11.9	169	**105**	3.85	3.54	0.38
2026	9.65	166	**100**	3.37	3.10	0.26
2027	0.19	16.9	5.92	0.06	0.05	<0.01

*Note: Values in **bold** are in excess of applicable standard.*
*Source: See **Appendix G.1.***

Operation

As discussed previously, reconstruction of the existing Vons store to be removed is proposed on the corner of Manchester Boulevard and Hillcrest Boulevard. **Table 4.2-9: Operational Air Quality Emissions – Vons Replacement** below shows the operational emissions that would be generated by the Vons store replacement prior to construction of the proposed Project.

Regional air emissions from the proposed Project were assessed based on the incremental increase/decrease in emissions compared to Adjusted Baseline conditions (i.e., existing on-site or off-site Project-related emissions), consistent with SCAQMD methodology.

Operational emissions are based on the estimates for operation of the station components of the proposed Project (ATS trains, stations, and MSF). Operation emissions also include mobile emissions that would result from worker commute trips and deliveries for supplies, maintenance, and other needs.

Table 4.2-9
Operational Air Quality Emissions – Vons Replacement

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
	pounds/day					
Total Emissions[a]	1.04	0.24	0.26	0.02	0.02	<0.01

*Refer to **Appendix G.2**.*
Notes: CO = carbon monoxide; NOx = nitrogen oxides; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; SOx = sulfur oxides; VOC = volatile organic compounds.
*[a] Total emissions do not include mobile emissions which are analyzed separately utilizing VMT estimates from the Transportation Study (**Appendix O**)*

As discussed, the proposed Project would include operations at the MSF facility which would generate air quality emissions from both area and stationary sources. **Table 4.2-10: Operational Air Quality Emissions – Normal Conditions** identifies the operational emissions from the MSF, stations, and other stationary components of the proposed Project. As shown, all emission for criteria pollutants emissions from operation of the proposed Project under normal operating conditions would be less than the existing emissions.

Table 4.2-10
Operational Air Quality Emissions – Normal Conditions

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
Employee Trips	0.27	8.50	0.46	0.60	0.25	0.03
Deliveries	0.03	0.27	0.34	0.08	0.04	0.00
Area (Consumer Products, Landscaping)	2.56	0.04	0.00	0.00	0.00	0.00
Energy Source (Natural Gas)	0.07	0.53	0.63	0.05	0.05	0.00
Subtotal Project (Typical Operations)	**2.92**	**9.34**	**1.42**	**0.73**	**0.33**	**0.04**

*Source: See **Appendix G.1.***

Table 4.2-11: Estimated Daily Operational Emissions/Reductions for Proposed Project Motor Vehicles presents the daily criteria air pollutant emissions for the six operational scenarios based on VMTs with and without the proposed Project. As shown, the proposed Project daily criteria air pollutant emissions are less than the daily criteria air pollutant emissions without the proposed Project.

Impacts related to proposed Project operation would be less than significant.

Table 4.2-11
Estimated Daily Operational Emissions/Reductions for Proposed Project Motor Vehicles

Scenario	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
	pounds/day					
Adjusted Baseline (2020) Nonevent Weekday without the proposed Project	473	12,315	3,088	403	194	28.3
Adjusted Baseline (2020) Nonevent Weekday with the proposed Project	467	12,156	3,048	398	191	28.0
Year 2027 with Event Weekday without the proposed Project	230	8,060	1,642	609	255	34.7
Year 2027 with Event Weekday with the proposed Project	219	7,682	1,565	581	243	33.0
Year 2045 with Event Weekday without the proposed Project	185	6,728	1,532	653	269	31.5
Year 2045 with Event Weekday with the proposed Project	175	6,352	1,447	616	254	29.7
Incremental Change	**VOC**	**CO**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**
	pounds/day					
Year 2027 with Event Weekday with the proposed Project vs Year 2027 with Event Weekday without the proposed Project	(10.8)	(378)	(77.0)	(28.6)	(12.0)	(1.63)
Year 2045 with Event Weekday with the proposed Project vs Year 2045 with Event Weekday without the proposed Project	(10.4)	(377)	(85.8)	(36.5)	(15.0)	(1.76)

*Source: See **Appendix G.1.***

Vendor specifications were used to determine air pollutants emission factors for the standby generators. Emission factors are 5.27 g/hp-hour for NOx, 0.5 g/hp-hour for CO, 0.18 g/hp-hour for VOC, and 0.4 g/hp-hour for $PM_{10}/PM_{2.5}$. The estimated annual fuel usage assuming each generator operates for 50 hours per year (2 hours per day) is 27,440 gallons of diesel fuel.[130]

As shown in **Table 4.2-12: Estimated Daily Emissions for Proposed Project Backup Generators**, current estimated emissions for each of the criteria pollutants are noted. As shown, daily emissions for each of

130 Vender Specifications for Standby Generator, https://www.cat.com/en_US/products/new/power-systems/electric-power.html. Accessed September 2021.

the backup generators are estimated to be 4.26 lbs./day for VOC, 11.8 lbs./day for CO, 125 lbs. day for NOx, 0.95 lbs./day for PM_{10}, 0.95 lbs./day for $PM_{2.5}$ and 8.68 lbs./day for SO_2.

Because the backup generators would only run for emergency conditions when the main electrical power was not available, and for regular testing, the emissions would be limited to only those periods and would not be an ongoing operational activity. Nevertheless, their emissions are included in the overall assessment of operational emissions to ensure a conservative analysis. Further, because the emissions from the operation of the proposed Project would regularly be less than the significance thresholds for NOx, and in fact would result in net negative emissions, the long-term impacts would be less than significant from the use of the backup generators.

Table 4.2-12
Estimated Daily Emissions (pounds) for Proposed Project Backup Generators

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
			(lbs. per day)			
Emergency Generator[1]	4.26	11.8	125	0.95	0.95	8.68

*Source: See **Appendix G.1.***
Notes:
*Values in **bold** are in excess of applicable standard.*
[1] Emissions are for each generator operating up to 2 hours per day for either emergency power needs or testing proposes.

Health Impacts

A description of adverse health effects from pollutants is provided above under *4.2.2.2: Health Effects of Pollutants*. In terms of correlating the emissions of regional pollutants to health impacts, it takes a very large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. As shown in **Table 4.2-13** below, the proposed Project would result in a net reduction in air quality emissions. Therefore, operation of the Project will not contribute to adverse health impacts related to emissions of criteria pollutants on a regional basis. A discussion of the potential for the Project to expose sensitive receptors to a substantial increase in pollutant concentrations and the Health Risk Assessment for emissions during construction are discussed below in Impact AQ-3.

Summary

Table 4.2-13: Estimated Total Daily Emissions for Proposed Project presents the daily criteria air pollutant operational emissions under normal operations including employee trips, deliveries, area sources, energy sources (natural gas), motor vehicle, while accounting for the reduction in motor vehicle as a result of the proposed Project and elimination of existing sources. Also presented are the typical daily emissions plus

O&M for the standby generators (one generator tested per day for 2 hours) associated with the proposed Project operations (e.g., 126 pounds of NOx). As shown, the typical daily emissions associated with the proposed Project operations would result in a net negative emissions. Therefore, the proposed Project operations would have a less than significant (and beneficial) impact on air quality and would not result in cumulatively considerable increases that for nonattainment pollutants ozone, PM_{10}, and $PM_{2.5}$.

Table 4.2-13
Estimated Total Daily Emissions for Proposed Project

Source	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
			(lbs. per day)			
Employee Trips	0.27	8.50	0.46	0.60	0.25	0.03
Deliveries	0.03	0.27	0.34	0.08	0.04	0.00
Area (Consumer Products, Landscaping)	2.56	0.04	0.00	0.00	0.00	0.00
Energy Source (Natural Gas)	0.07	0.53	0.63	0.05	0.05	0.00
Subtotal Project (Normal Operations)	**2.92**	**9.34**	**1.42**	**0.73**	**0.33**	**0.04**
Emergency Generators	4.26	11.8	125	0.95	0.95	8.68
Subtotal Project (Normal Operations + O&M)	**7.18**	**21.2**	**126**	**1.67**	**1.28**	**8.72**
Motor Vehicles	-10.8	-378	-77.0	-28.6	-12.0	-1.63
Subtotal (Project with Motor Vehicle Reductions)	**-3.62**	**-357**	**49.0**	**-26.9**	**-10.7**	**7.09**
Existing Condition	-45.9	-1,329	-143	-55.9	-23.6	-3.79
Vons Replacement Store	1.04	0.24	0.26	0.02	0.02	<0.01
Grand Total (Project)	**-44.9**	**-1,328.8**	**-142.7**	**-55.9**	**-23.6**	**-3.8**
Significance Threshold	55	550	55	150	55	150
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

*Source: See **Appendix G.1.***
*Notes: Standby generator values based on vendor specifications. Employee trips and deliveries values based on EMFAC. Area sources and energy (Natural Gas) values based on CalEEMod. Existing Condition values based on **Table 4.2-4**.*

Mitigation Measures

As described above, the proposed Project's CCP includes **PDF AQ-1** which would reduce air quality emissions during construction of the proposed Project. **MM AQ-1** incorporates **PDF AQ-1** into the post-mitigated modeling for construction of the proposed Project. **PDF-AQ 1** describes a number of specific actions to reduce construction NOx emissions from on-road vehicles and off-road equipment used in construction activities.

MM AQ-1: PDF AQ-1, Construction Air Quality Program, shall be implemented during construction of the ITC Project.

Level of Significance after Mitigation

Construction

MM AQ-1 incorporates **PDF AQ-1** from the proposed Project's CCP and was included in the post-mitigation modeling for construction of the proposed Project. Specifically, **PDF AQ-1** would require the use equipment that meets the USEPA's Final Tier 4 emissions standards for off-road diesel-powered construction equipment with 50 hp or greater, for all phases of construction activity, or the use of equipment that would achieve equivalent emissions reductions. Additionally, **PDF AQ-1** would require construction vendors, contractors, and/or haul truck operators to commit to using 2010 model year, or equivalent, trucks. **PDF AQ-1** would also require the use of electric or alternatively fueled (e.g., natural gas) sweepers with HEPA filters. Compliance with these mitigation measures would result in substantial reductions in emissions of VOC, NOx PM_{10}, and $PM_{2.5}$ compared to fleet-wide average emissions for heavy-duty construction equipment and trucks in the southern California region.

Table 4.2-14: Daily Mitigated Construction Emissions for Proposed Project shows the estimated daily mitigated emissions for construction related emissions (including combustion engine and fugitive dust emissions) for the proposed Project including **MM AQ-1.**

The total construction emissions including the contribution from employee vehicle trips, pickup/delivery trucks, haul trucks, and off-road equipment are presented. The daily mitigated construction emissions would not exceed the SCAQMD thresholds of significance. The mitigation measures represent a reduction of approximately 3926 percent of the NOx emissions, approximately 3620 percent of the PM10 emissions, and approximately 4831 percent of the PM2.5 emissions. As such, construction of the proposed Project would not result a cumulatively considerable increase in emissions. Impacts would be less than significant with mitigation.

Operation

Operational emissions are based on the estimates for both stationary/area and energy sources for operation of the station components of the proposed Project (ATS trains, stations, and MSF) and mobile sources from worker commute trips and deliveries for supplies, maintenance, and other needs).

As shown in **Table 4.2-13**, the typical daily emissions associated with the proposed Project operations would result in a net negative emissions. Moreover, daily emissions under normal operations would be below the SCAQMD operational thresholds for all emissions.

Table 4.2-14
Daily Mitigated Construction Emissions for Proposed Project

Construction Year	VOC	CO	NOx	PM_{10}	$PM_{2.5}$	SO_2
	pounds/day					
Grand Total						
2024	9.81	393	81.2	4.53	2.61	0.49
2025	10.0	383	79.7	5.03	2.85	0.52
2026	7.80	333	76.1	5.21	2.71	0.45
2027	0.31	25.2	7.80	0.55	0.24	0.03
Significance Thresholds	**75**	**550**	**100**	**150**	**55**	**150**
Employee Vehicles						
2024	0.63	19.3	1.73	1.19	0.50	0.07
2025	0.54	16.7	1.42	1.09	0.45	0.06
2026	0.79	24.1	1.98	1.66	0.69	0.09
2027	0.12	3.52	0.28	0.25	0.10	0.01
Pickup/Delivery Trucks						
2024	0.33	8.06	3.82	0.80	0.35	0.05
2025	0.41	9.62	4.48	1.05	0.46	0.07
2026	0.58	15.0	6.88	1.80	0.78	0.11
2027	0.10	2.74	1.02	0.29	0.13	0.02
Haul Trucks						
2024	0.11	0.77	13.4	1.40	0.63	0.08
2025	0.12	0.94	16.3	1.71	0.77	0.10
2026	0.07	0.51	8.89	0.94	0.42	0.05
2027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Off-road Equipment						
2024	8.74	365	62.2	1.14	1.14	0.29
2025	8.95	356	57.5	1.17	1.17	0.30
2026	6.37	293	58.3	0.81	0.81	0.20
2027	0.09	18.9	6.50	0.01	0.01	<0.01

*Note: Values in **bold** are in excess of applicable standard.*
*Source: See **Appendix G.1.***

As shown in **Table 4.2-13**, the daily emissions for a backup generator would exceed the NOx SCAQMD threshold. Backup generators would only run for emergency conditions when the main electrical power was not available, and for regular testing. As such, the emissions would be limited to only those periods and would not be an ongoing operational activity. Moreover, the overall reductions in emissions from operation of the Project would more than offset emissions from operation of the generators. Therefore, the proposed Project operations would have a less than significant (and beneficial) impact on air quality and would not result in cumulatively considerable increases that for nonattainment pollutants ozone, PM_{10}, and $PM_{2.5}$. Pursuant to SCAQMD guidance, the proposed Project's operations would not result in a cumulatively considerable number of emissions of any nonattainment pollutant.

Impacts related to proposed Project operation would be less than significant.

Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction

Air Dispersion Analysis

A dispersion modeling analysis was conducted to assess related impacts to air concentrations of CO, NO_2, PM_{10}, $PM_{2.5}$, and SO_2 for nearby receptors within one quarter mile of the proposed Project. These receptors are designed to represent off-site locations where a person has access and can be situated for an hour or longer at a time (which is different from the HRA receptors discussed below, which are designed to represent specific residences, schools, daycares, off-site worker locations).

The ambient air quality standards analysis results are presented for both the Morning/Evening and Morning/Night construction scenarios identified in the Construction Phasing Narrative (see **Appendix F.1**). Concentrations were compared to SCAQMD's significance thresholds and California/federal ambient air quality standards as identified in **Table 4.2-6**.

Morning/Evening Construction Activities

Estimated emissions for the various criteria pollutants for the Morning/Evening scenario are shown in **Table 4.2-15: Estimated Unmitigated Concentration Impacts from Construction Activities for Morning/Evening Scenario**.

NOx

For the nearby receptors during construction for the Morning/Evening scenario, the incremental 1-hour NO_2 impacts to a receptor, including background concentrations, would be a maximum of 0.16 ppm, which is below the State threshold of 0.18 ppm. The maximum construction incremental annual NO_2 impacts to a nearby receptor, including background concentrations, would be 0.01 ppm, which is below the thresholds of 0.03 ppm (State) and below the threshold of 0.0534 ppm (federal). However, the maximum incremental 98th percentile 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.12 ppm, which is above the federal threshold of 0.10 ppm. As such, impacts would be potentially significant for the 1-hour NO_2 federal threshold of 0.10 ppm without mitigation.

Particulate Matter

As shown in **Table 4.2-15**, for the nearby receptors during construction, the maximum incremental 24-hour and annual PM_{10} impacts to a sensitive receptor would be 2.79 µg/m^3 and 0.11 µg/m^3, respectively; impacts would be below the 24-hour PM_{10} threshold of 10.4 µg/m^3 and below the annual PM_{10} threshold of 1.0 µg/m^3. The construction maximum incremental 24-hour $PM_{2.5}$ impacts to a sensitive receptor would

be 2.42 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 10.4 µg/m^3. Therefore, unmitigated construction activities would result in a less than significant air quality impact of PM_{10} and $PM_{2.5}$ on nearby receptors due to construction activities.

CO and SO_2

Concentrations of CO and SO_2 during the Morning/Evening scenario would not exceed significance thresholds on nearby receptors as shown in **Table 4.2-15**. Impacts of CO and SO_2 would be less than significant.

Morning/Night Construction Activities

As shown in **Table 4.2-16: Estimated Unmitigated Concentration Impacts from Construction Activities for Morning/Night Scenario**, estimated emissions for the various criteria pollutants for the Morning/Night scenario.

NOx

For the nearby receptors during construction for the Morning/Night scenario, the maximum construction incremental annual NO_2 impacts including background concentrations would be 0.01 ppm, which is below the thresholds of 0.03 ppm (State) and 0.0534 ppm (federal). However, the maximum construction incremental 1-hour NO_2 impacts to a receptor, including background concentrations, would be 0.20 ppm, which is above the State threshold of 0.18 ppm. Additionally, the maximum incremental 98th percentile 1-hour NO_2 impacts to nearby receptor, including background concentrations, would be 0.14 ppm, which is above the federal threshold of 0.10 ppm. As such, impacts would be potentially significant for the 1-hour NO_2 State threshold of 0.18 ppm and the 1-hour NO_2 federal threshold of 0.10 ppm without mitigation.

Particulate Matter

As shown in **Table 4.2-16**, for the nearby receptors, the construction maximum incremental 24-hour and annual PM_{10} impacts to a receptor would be 3.75 µg/m^3 and 0.10 µg/m^3, respectively. Impacts would be below the 24-hour PM_{10} threshold of 10.4 µg/m^3 and below the annual PM_{10} threshold of 1.0 µg/m^3. The construction maximum incremental 24-hour $PM_{2.5}$ impacts would be 3.30 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 10.4 µg/m^3. Therefore, unmitigated construction activities would result in a less than significant air quality impact of PM_{10} and $PM_{2.5}$ on nearby receptors due to construction activities.

CO and SO_2

Concentrations of CO and SO_2 during the Morning/Night scenario would not exceed significance thresholds on nearby receptors as shown in **Table 4.2-16**. Impacts of CO and SO_2 would be less than significant.

Table 4.2-15
Estimated Unmitigated Concentration Impacts from Construction Activities for Morning/Evening Scenario
(Approximately 7:00 AM to 3:00 PM and 3:00 PM to 11:00 PM)

Criteria	Maximum 1-Hour NO_2 (ppm)	98% 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Off-site Receptor (Project Increment)	0.07	0.06	<0.01	<0.01	2.79	0.11	2.42	<0.01	<0.01	<0.01	0.37	0.05
Background Concentration	0.07	0.05	0.01	0.01				0.01	0.01	<0.01	2.10	1.60
Adjusted Baseline Concentration	0.02	0.01	<0.01	<0.01				<0.01	<0.01	<0.01	1.80	0.80
Total Concentration	**0.16**	**0.12**	**0.01**	**0.01**	**2.79**	**0.11**	**2.42**	**0.01**	**0.01**	**<0.01**	**4.27**	**2.45**
Significance Threshold	*0.18*	*0.10*	*0.03*	*0.0534*	*10.4*	*1.00*	*10.4*	*0.25*	*0.075*	*0.04*	*20.0*	*9.00*
Potentially Significant (Yes or No)?	No	**Yes**	No	No	No	No	No	No	No	No	No	No

*Source: See **Appendix G.1.***
Total concentrations reflect rounding of values (Project Increment plus background concentration). Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Table 4.2-16
Estimated Unmitigated Concentration Impacts from Construction Activities for Morning/Night Scenario
(Approximately 7:00 AM to 3:00 PM and 11:00 PM to 7:00 AM)

Criteria	Maximum 1-Hour NO_2 (ppm)	98% 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Off-site Receptor (Project Increment)	0.11	0.07	<0.01	<0.01	3.75	0.10	3.30	<0.01	<0.01	<0.01	0.69	0.06
Background Concentration	0.07	0.05	0.01	0.01				0.01	0.01	<0.01	2.10	1.60
Adjusted Baseline Concentration	0.02	0.01	<0.01	<0.01				<0.01	<0.01	<0.01	1.80	0.80
Total Concentration	**0.20**	**0.14**	**0.01**	**0.01**	**3.75**	**0.10**	**3.30**	**0.01**	**0.01**	**<0.01**	**4.59**	**2.46**
Significance Threshold	*0.18*	*0.10*	*0.03*	*0.0534*	*10.4*	*1.00*	*10.4*	*0.25*	*0.075*	*0.04*	*20.0*	*9.00*
Potentially Significant (Yes or No)?	**Yes**	**Yes**	No	No	No	No	No	No	No	No	No	No

*Source: See **Appendix G.1.***
Total concentrations reflect rounding of values (Project Increment plus background concentration). Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Health Risk Assessment

An HRA was conducted for the proposed Project to address the potential for human health impacts associated with construction of the proposed Project. The SCAQMD thresholds of significance applied to assess project-level health impacts are the exposure of persons to substantial levels of air toxics resulting in (a) a cancer risk level greater than 10 per one million persons; or (b) a noncancerous risk (chronic or acute) hazard index greater than 1; or (c) a cancer burden of greater than 0.5 excess cancer cases.[131] For this threshold, sensitive receptors include residential uses, schools, daycare centers, nursing homes, medical centers, and off-site workers.

Lifetime Cancer Risk

The proposed Project would constitute a new emission source of DPM due to its construction activities. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health impact. 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 air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology and a 30-year exposure duration. The maximally exposed individual (MEI) represents the worst–case risk estimate, based on a theoretical person being exposed for a period of 30 years at the highest concentration. This is a highly conservative assumption since most people do not remain in place all day and on average residents change residences every 11 to 12 years and do not stay in the same place of work for 25 years. In addition, this assumes that individuals are experiencing outdoor concentrations for the entire exposure period (even when indoors). A school child exposure duration is between ages 2 and 16 years old, which again, is conservative because the elementary, middle, and high school are not often located at the same location. This theoretical 30-year exposure duration also does not apply to temporary exposure during construction of the project, which will have a duration of approximately 46 months.

If incremental individual cancer risk from the proposed Project would exceed the SCAQMD regulatory threshold of an incremental increase of 10 in one million, then an estimated determination of population level risks is required (a cancer burden analysis). For the cancer burden analysis, the proposed Project risks from construction and operation impacts are evaluated for a 70-year residential scenario.[132]

131 South Coast Air Quality Management District, 2017. Risk Assessment Procedures for Rule 1401, 1401.1, and 212, Version 8.1, September 1, 2017.

132 South Coast Air Quality Management District, 2017. Risk Assessment Procedures for Rule 1401, 1401.1, and 212, Version 8.1, September 1, 2017.

Noncarcinogenic Health Risk (Chronic and Acute)

The HRA also evaluates the risk of potential noncarcinogenic negative health outcomes related to TACs exposure from airborne emissions during the construction of the proposed Project. For construction, the potential TAC emission sources are heavy-duty equipment used during demolition, grading and excavation, and building construction activities. The HRA followed the procedures and methods provided in the Guidance Manual for Preparation of Health Risk Assessments issued by the OEHHA in 2015[133] as well as the methods in the SCAQMD's Risk Assessment Procedures[134] used in conjunction with the associated SCAQMD Permit Application Package "N."[135] Noncancer effects of chronic (i.e., long- term) and acute (i.e., short-term) TAC exposure were evaluated using the Hazard Index (HI) approach consistent with the OEHHA and SCAQMD guidance.

A chronic health impact equal to or greater than 1.0 represents a significant chronic health hazard. A chronic health effect could include irritation to eyes, throat, lungs, or neurological damage. The proposed Project related TACs with known or suspected chronic health effects emitted during construction could include DPM, acetaldehyde, benzene, 1,3-butadiene, formaldehyde, and nickel.[136] An acute health impact equal to or greater than 1.0 represents a significant acute health hazard. An acute health effect could include irritation to eyes, throat, or lungs, sensory irritation, or coughing, chest pain or vomiting.

Morning/Evening Construction Activities

Table 4.2-17: Estimated Unmitigated Health Impacts from Construction Activities for Morning/Evening Scenario provides the proposed Project's unmitigated health impacts from construction activities for existing residences, schools, daycares, and off-site workers, and proposed residences. A large majority of the health impacts are due to off-road construction equipment operating within the proposed Project construction areas with a minimal contribution from off-site construction truck travel along nearby roadways.

As shown in **Table 4.2-17**, the maximum cancer risk from unmitigated proposed Project construction emissions for existing residential receptors would be 21.9 per one million persons. Moreover, the maximum cancer risk from unmitigated proposed Project construction emissions for proposed residential receptors would be 18.1 per one million persons. Thus, the cancer risk for residential receptors due to

133 Office of Environmental Health Assessment, Air Toxic Hotspots Program, Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessment, February 2015. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

134 South Coast Air Quality Management District, 2017. Risk Assessment Procedures for Rule 1401, 1401.1, and 212, Version 8.1, September 1, 2017.

135 SCAQMD, Permit Application Package "N", for Use in Conjunction with the Risk Assessment Procedures for Rules 1401, 1401.1, and 212, Draft Version 8.1.

136 Office of Environmental Health Hazard Assessment. Determination of Noncancer Chronic Reference Exposure Levels. February 2000.

construction activities would be potentially above the SCAQMD threshold of 10 per one million persons and would be potentially significant for residential receptors due to construction activities. The cancer burden due to construction activities would be 0.03[137] and below the SCAQMD threshold of 0.5 excess cancer cases and would therefore be less than significant for all residential receptors due to construction activities.

Table 4.2-17
Estimated Unmitigated Health Impacts from Construction Activities
for Morning/Evening Scenario
(Approximately 7:00 AM to 3:00 PM and 3:00 PM to 11:00 PM)

Criteria	Cancer Risk	Chronic/Acute Impact
Existing Residence	**21.9**	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	**Yes**	No
Off-site School/Daycare	1.05	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	No	No
Off-site Worker	0.43	0.02
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	No	No
Proposed Residence	**18.1**	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	**Yes**	No

*Note: Values in **bold** are in excess of applicable standard.*
*Source: See **Appendix G.1.***

The unmitigated chronic health impact would be 0.01, based on a proposed Project-related maximum annual diesel concentration of 0.07 µg/m^3 (per dispersion modeling analysis) or 0.07 µg/m^3/5.0 µ g/m^3, which is 0.01. The chronic health impact due to construction activities would be below the project-level threshold of 1 and would therefore be less than significant for all residential receptors due to construction activities.

As shown in **Table 4.2-17**, the maximum cancer risk from unmitigated proposed Project construction emissions for a school/daycare receptor would be 1.05 per one million persons. Thus, the cancer risk for school/daycare receptors due to construction activities would be below the SCAQMD threshold of 10 per

137 Cancer burden is the total cancer risk for all receptors divided by the estimated population within the modeling domain.

one million persons and would be less than significant for all off-site school/daycare receptors due to construction activities.

The maximum unmitigated chronic health impact for an off-site school/daycare receptor would be 0.01. Thus, the chronic health impact due to construction activities for all off-site school/daycare receptors would be below the project-level threshold of 1 and the chronic health impact would be less than significant for all off-site school/daycare receptors due to construction activities.

As shown in **Table 4.2-17**, the maximum cancer risk from unmitigated proposed Project construction emissions for an off-site worker receptor (such as office buildings, retail centers, hotels, hospitals) would be 0.43 per one million persons. Thus, the cancer risk for an off-site worker receptor due to construction activities would be below the SCAQMD threshold of 10 per one million persons and would be less than significant for all off-site worker receptors due to construction activities.

The maximum unmitigated chronic health impact for an off-site worker receptor would be 0.02. Thus, the chronic health impact due to construction activities for all off-site worker receptors would be below the project-level threshold of 1 and the chronic health impact would be less than significant for all off-site worker receptors due to construction activities.

Morning/Night Construction Activities

Table 4.2-18: Estimated Unmitigated Health Impacts from Construction Activities for Morning/Night Scenario provides the proposed Project's unmitigated health impacts from construction activities for existing residences, schools, daycares, and off-site workers, and proposed residences. A large majority of the health impacts are due to off-road construction equipment operating within the proposed Project construction areas with a minimal contribution from off-site construction truck travel along nearby roadways.

As shown in **Table 4.2-18**, the maximum cancer risk from unmitigated proposed Project construction emissions for a residential receptor would be 24.7 per one million persons. Moreover, the maximum cancer risk from unmitigated proposed Project construction emissions for proposed residential receptors would be 27.8 per one million persons. Thus, the cancer risk for residential receptors due to construction activities would be potentially above the SCAQMD threshold of 10 per one million persons and would be potentially significant for residential receptors due to construction activities. The cancer burden due to construction activities would be 0.02[138] and below the SCAQMD threshold of 0.5 excess cancer cases and would therefore be less than significant for all residential receptors due to construction activities.

138 Cancer burden is the total cancer risk for all receptors divided by the estimated population within the modeling domain.

The unmitigated chronic health impact would be 0.01, based on a proposed Project-related maximum annual diesel concentration of 0.08 µg/m^3 (per dispersion modeling analysis) or 0.08 µg/m^3/5.0 µ g/m^3, which is 0.01. The chronic health impact due to construction activities would be below the project-level threshold of 1 and would therefore be less than significant for all residential receptors due to construction activities.

Table 4.2-18
Estimated Unmitigated Health Impacts from Construction Activities for Morning/Night Scenario (Approximately 7:00 AM to 3:00 PM and 11:00 PM to 7:00 AM)

Criteria	Cancer Risk	Chronic/Acute Impact
Existing Residence	**24.7**	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	**Yes**	No
Off-site School/Daycare	1.62	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	No	No
Off-site Worker	0.28	0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	No	No
Proposed Residence	**27.8**	0.02
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	**Yes**	No

*Note: Values in **bold** are in excess of applicable standard.*
*Source: See **Appendix G1: Air Quality and Human Health Risk Assessment**.*

As shown in **Table 4.2-18**, the maximum cancer risk from unmitigated proposed Project construction emissions for a school/daycare receptor would be 1.62 per one million persons. Thus, the cancer risk for school/daycare receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons and would be less than significant for all off-site school/daycare receptors due to construction activities.

The maximum unmitigated chronic health impact for an off-site school/daycare receptors would be 0.01. Thus, the chronic health impact due to construction activities for all off-site school/daycare receptors would be below the project-level threshold of 1 and the chronic health impact would be less than significant for all off-site school/daycare receptors due to construction activities.

As shown in **Table 4.2-18**, the maximum cancer risk from unmitigated proposed Project construction emissions for an off-site worker receptor (such as office buildings, retail centers, hotels, hospitals) would

be 0.28 per one million persons. Thus, the cancer risk for off-site worker receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons and would be less than significant health impacts for all off-site worker receptors due to construction activities.

The maximum unmitigated chronic health impact modeled to occur at an off-site worker receptor would be 0.01. Thus, the chronic health impact due to construction activities at all off-site worker receptors would be below the project-level threshold of 1 and would be less than significant for all off-site worker receptors due to construction activities.

Summary

As a result of emissions from TACs for both the Morning/Evening and Morning/Night scenarios, the proposed Project, without mitigation could result in an incremental cancer risk that exceeds applicable standards, the impacts related to such exposures are potentially significant.

The proposed Project, without mitigation, would result in noncarcinogenic health risk that would be below the significance threshold of a chronic health impact of 1.0 for the maximum impacted resident, worker, school (child), and early childhood education (child) receptors and, this, this impact would be less than significant.

Operation

As discussed in **Impact AQ-2**, the typical daily emissions associated with the proposed Project operations would result in net negative emissions. As a result, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts from operation would be less than significant.

Mitigation Measures

Construction Mitigation

As described above, the proposed Project's CCP includes **PDF AQ-1** which would reduce air quality emissions during construction of the proposed Project. **Mitigation Measure MM AQ-1** incorporates **PDF AQ-1** into the post-mitigated modeling for construction of the proposed Project.

Operation Mitigation

As there are no significant impacts resulting from operation of the proposed Project, no mitigation required.

Level of Significance after Mitigation

Air Dispersion Analysis

Morning/Evening Scenario

As noted above, during the Morning/Evening scenario the unmitigated maximum incremental 98th percentile 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.12 ppm, which is above the federal threshold of 0.10 ppm. As shown in **Table 4.2-19: Estimated Mitigated Concentration Impacts from Construction Activities for Morning/Evening Scenario**, for the air quality receptors during construction, the maximum incremental 98th percentile 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.09 ppm, which is below the federal threshold of 0.10 ppm. The maximum construction incremental annual NO_2 impacts including background concentrations would be 0.01 ppm, which is below the thresholds of 0.03 ppm (state) and below the threshold of 0.0534 ppm (federal). Therefore, mitigated construction activities would not exceed the 1-hour and annual NO_2 thresholds.

Impacts would be less than significant with incorporation of mitigation for NO_2 on nearby receptors during construction activities for the Morning/Evening Scenario.

Morning/Night Scenario

As noted above, during the Morning/Night scenario the unmitigated construction incremental 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.20 ppm, which is above the State threshold of 0.18 ppm. Moreover, unmitigated maximum incremental 98th percentile 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.14 ppm, which is above the federal threshold of 0.10 ppm. As shown in **Table 4.2-20: Estimated Mitigated Concentration Impacts from Construction Activities for Morning/Night Scenario**, for the air quality receptors, the maximum incremental 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.14 ppm, which is below the State threshold of 0.18 ppm. Moreover, maximum incremental 98th percentile 1-hour NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.099 ppm, which is below the federal threshold of 0.10 ppm. The maximum construction incremental annual NO_2 impacts to a sensitive receptor, including background concentrations, would be 0.01 ppm, which is below the thresholds of 0.03 ppm (State) and 0.0534 ppm (federal).

Impacts would be less than significant with incorporation of mitigation for NO_2 on nearby receptors during construction activities for the Morning/Night Scenario.

Table 4.2-19
Estimated Mitigated Concentration Impacts from Construction Activities for Morning/Evening Scenario
(Approximately 7:00 AM to 3:00 PM and 3:00 PM to 11:00 PM)

Criteria	Maximum 1-Hour NO_2 (ppm)	98% 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Off-site Receptor (Project Increment)	0.03	0.03	<0.01	<0.01	0.83	0.05	0.64	<0.01	<0.01	<0.01	0.66	0.08
Background Concentration	0.07	0.05	0.01	0.01				0.01	0.01	<0.01	2.10	1.60
Adjusted Baseline Concentration	0.02	0.01	<0.01	<0.01				<0.01	<0.01	<0.01	1.80	0.80
Total Concentration	**0.12**	**0.09**	**0.01**	**0.01**	**0.83**	**0.05**	**0.64**	**0.01**	**0.01**	**<0.01**	**4.56**	**2.48**
Significance Threshold	*0.18*	*0.10*	*0.03*	*0.0534*	*10.4*	*1.00*	*10.4*	*0.25*	*0.075*	*0.04*	*20.0*	*9.00*
Threshold Exceeded?	No	No	No	No	No	No	No	No	No	No	No	No

*Source: See **Appendix G.1.***

Total concentrations reflect rounding of values (Project Increment plus background concentration). Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

[a] This value was rounded up from 0.098 and would be below the threshold of 0.10.

Table 4.2-20
Estimated Mitigated Concentration Impacts from Construction Activities for Morning/Night Scenario
(Approximately 7:00 AM to 3:00 PM and 11:00 PM to 7:00 AM)

Criteria	Maximum 1-Hour NO_2 (ppm)	98% 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Off-site Receptor (Project Increment)	0.06	0.04	<0.01	<0.01	1.07	0.05	0.88	<0.01	<0.01	<0.01	1.27	0.11
Background Concentration	0.07	0.05	0.01	0.01				0.01	0.01	<0.01	2.10	1.60
Adjusted Baseline Concentration	0.02	0.01	<0.01	<0.01				<0.01	<0.01	<0.01	1.80	0.80
Total Concentration	**0.14**	**0.10[a]**	**0.01**	**0.01**	**1.07**	**0.05**	**0.88**	**0.01**	**0.01**	**<0.01**	**5.17**	**2.51**
Significance Threshold	*0.18*	*0.10*	*0.03*	*0.0534*	*10.4*	*1.00*	*10.4*	*0.25*	*0.075*	*0.04*	*20.0*	*9.00*
Threshold Exceeded?	No	No	No	No	No	No	No	No	No	No	No	No

*Source: See **Appendix G.1.***
Total concentrations reflect rounding of values (Project Increment plus background concentration). Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.
[a] This value was rounded up from 0.099 and would be below the threshold of 0.10.

Health Risk Assessment

Morning/Evening Scenario

As noted above, during the Morning/Evening scenario the maximum cancer risk from the unmitigated construction emissions from the proposed Project for existing residential receptors would be 21.9 per one million persons. The maximum cancer risk from unmitigated construction emissions from the proposed Project for proposed residential receptors would be 18.1 per one million persons. **Table 4.2-21: Estimated Mitigated Health Impacts from Construction Activities for Morning/Evening Scenario** provides the mitigated proposed Project health impacts from construction activities for existing residences, schools, daycares, and off-site workers, and proposed residences. A large majority of the health impacts are due to off-road construction equipment operating within the proposed Project construction areas with a minimal contribution from off-site construction truck travel along nearby roadways.

Table 4.2-21
Estimated Mitigated Health Impacts from Construction Activities for Morning/Evening Scenario
(Approximately 7:00 AM to 3:00 PM and 3:00 PM to 11:00 PM)

Criteria	Cancer Risk	Chronic/Acute
Existing Off-site Residence	7.21	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Off-site School/Daycare	0.34	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Off-site Worker	0.14	0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Proposed Residence	5.94	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No

*Notes: Values in **bold** are in excess of applicable standard.*
*Source: See **Appendix G.1.***

Residential Receptors

As shown in **Table 4.2-21**, the maximum cancer risk from mitigated construction emissions from the proposed Project for existing residential receptors would be 7.21 per one million persons. The maximum cancer risk from mitigated construction emissions from the proposed Project for residential receptors would be 5.94 per one million persons. Thus, the cancer risk for residential receptors due to construction activities would be less than significant for all residential receptors due to construction activities. The

cancer burden due to construction activities would be 0.01[139] and below the SCAQMD threshold of 0.5 excess cancer cases.

The mitigated chronic health impact would be less than 0.01, based on a proposed Project-related maximum annual diesel concentration of 0.02 µg/m^3 (per dispersion modeling analysis) or 0.02 µg/m^3/5.0 µ g/m^3, which is 0.01. The chronic health impact due to construction activities would be below the project-level threshold of 1.

Impacts for chronic health issues would be less than significant for all residential receptors due to construction activities.

School/Daycare Receptors

As shown in **Table 4.2-21**, the maximum cancer risk from mitigated proposed construction emissions for a school/daycare receptor would be 0.34 per one million persons.[140] Thus, the cancer risk for school/daycare receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons and would be less than significant health impacts for all school/daycare receptors due to construction activities. The maximum mitigated chronic health impact for a school/daycare receptor would be less than 0.01. The chronic health impact due to construction activities for all school/daycare receptors would be below the project-level threshold of 1.

The chronic health impact would be less than significant for all school/daycare receptors during construction activities.

Off-site Worker Receptor

As shown in **Table 4.2-21**, the maximum cancer risk from mitigated proposed Project construction emissions for an off-site worker receptor would be 0.14 per one million persons. Thus, the cancer risk for off-site worker receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons.

Impacts would be less than significant health impacts for all off-site worker receptors during construction activities.

The maximum mitigated chronic health impact modeled to occur at an off-site worker receptor would be 0.01. Thus, the chronic health impact due to construction activities at all off-site worker receptors would be below the project-level threshold of 1.

139 Cancer burden is the total cancer risk for all receptors divided by the estimated population within the modeling domain.
140 Primarily due to construction activities during year 2 (2025) and 3 (2026) within Phases 1 through 8.

Impacts for chronic health issues would be less than significant for all off-site worker receptors during construction activities.

Morning/Night Scenario

As noted above, the maximum cancer risk from unmitigated construction emissions from the proposed Project for existing residential receptors would be 24.7 per one million persons. The maximum cancer risk from unmitigated construction emissions from the proposed Project for proposed residential receptors would be 27.8 per one million persons. **Table 4.2-22: Estimated Mitigated Health Impacts from Construction Activities for Morning/Night Scenario** provides the mitigated proposed Project health impacts from construction activities for existing residences, schools, daycares, and off-site workers, and proposed residences. A large majority of the health impacts are due to off-road construction equipment operating within the proposed Project construction areas with a minimal contribution from off-site construction truck travel along nearby roadways.

Table 4.2-22
Estimated Mitigated Health Impacts from Construction Activities for Morning/Night Scenario (Approximately 7:00 AM to 3:00 PM and 11:00 PM to 7:00 AM)

Criteria	Cancer Risk	Chronic/Acute Impact
Existing Off-site Residence	8.18	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Off-site School/Daycare	0.52	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Off-site Worker	0.09	<0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No
Off-site Worker	9.17	0.01
Significance Threshold	10	1.0
Threshold Exceeded?	No	No

*Note: Values in **bold** are in excess of applicable standard.*
*Source: **Appendix G.1.***

Residential Receptors

As shown in **Table 4.2-22**, the maximum cancer risk from mitigated construction emissions from the proposed Project for existing residential receptors would be 8.18 per one million persons. The maximum cancer risk from mitigated construction emissions from the proposed Project for proposed residential

receptors would be 9.17 per one million persons. Thus, the cancer risk for residential receptors due to construction activities would be less than significant for all residential receptors due to construction activities. The cancer burden due to construction activities would be 0.01[141] and below the SCAQMD threshold of 0.5 excess cancer cases.

The mitigated chronic health impact would be 0.01, based on a proposed Project-related maximum annual diesel concentration of 0.02 µg/m^3 (per dispersion modeling analysis) or 0.02 µg/m^3/5.0 µ g/m^3, which is 0.01. The chronic health impact due to construction activities would be below the project-level threshold of 1.

Impacts for chronic health issues would be less than significant for all residential receptors during construction activities.

School/Daycare Receptors

As shown in **Table 4.2-22**, the maximum cancer risk from mitigated proposed Project construction emissions for a school/daycare receptor would be 0.52 per one million persons.[142] Thus, the cancer risk for school/daycare receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons.

The maximum mitigated chronic health impact for all school/daycare receptors would be less than 0.01. Thus, the chronic health impact due to construction activities for all school/daycare receptors would be below the project-level threshold of 1.

The chronic health impact would be less than significant for all school/daycare receptors during construction activities.

Off-site Worker Receptor

As shown in **Table 4.2-22**, the maximum cancer risk from mitigated proposed Project construction emissions for an off-site worker receptor would be 0.09 per one million persons. Thus, the cancer risk for off-site worker receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons.

The maximum mitigated chronic health impact modeled to occur at an off-site worker receptor would be less than 0.01. Thus, the chronic health impact due to construction activities at all off-site worker receptors would be below the project-level threshold of 1.

141 Cancer burden is the total cancer risk for all receptors divided by the estimated population within the modeling domain.
142 Primarily due to construction activities during year 2 (2025) and 3 (2026) within Phases 1 through 8.

Impacts would be less than significant for all off-site worker receptors during construction activities.

Summary

The SCAQMD thresholds of significance applied to assess project-level health impacts are the exposure of persons to substantial levels of air toxics resulting in (a) a cancer risk level greater than 10 per one million persons or (b) a noncancerous risk (chronic or acute) hazard index greater than 1 or (c) a cancer burden of greater than 0.5 excess cancer cases.[143]

Localized impacts from criteria pollutants would be a less than significant with incorporation of mitigation measures designed to reduce NO_2 on nearby receptors during construction activities for the Morning/Evening and Morning/Night Scenarios during construction.

The proposed Project would result in carcinogenic health risk that would be below the significance threshold for the maximum impacted resident, worker, school (child), and early childhood education (child) receptors and, this, this impact would be less than significant with the implementation of mitigation.

Emissions of TACs would result in acute and chronic noncarcinogenic health risks below applicable standards, the impacts related to such exposures are less than significant. Therefore, the impacts related to exposing air quality sensitive receptors to substantial pollutant emissions would be less than significant with the implementation of mitigation.

4.2.8 CUMULATIVE IMPACTS

The following cumulative impact analysis is based on the recommendations provided by SCAQMD in the *Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper*.[144] SCAQMD's guidance for assessing a project's cumulative impacts recommends the use of two alternative methodologies: (1) that project-specific air quality impacts be used to determine the project's potential cumulative impacts to regional air quality; or (2) that a project's consistency with the AQMPs are used to determine its potential cumulative impacts. Under SCAQMD's guidance, "[p]rojects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively

143 South Coast Air Quality Management District, 2017. Risk Assessment Procedures for Rule 1401, 1401.1, and 212, Version 8.1, September 1, 2017.

144 SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, August 2003. http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf. Accessed September 2021.

significant." Consistent with this guidance, the potential for the proposed Project to results in cumulative impacts from regional emissions is assessed based on SCAQMD thresholds.

According to the SCAQMD, individual development projects that exceed the SCAQMD-recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

4.2.8.1 Construction

The SCAQMD CEQA *Air Quality Handbook*[145] states: "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District." According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants.

During construction, the proposed Project's unmitigated daily criteria pollutant emissions would not exceed SCAQMD thresholds, with the exception of NOx. Implementation of **MM AQ-1** would reduce potential construction-related proposed Project's daily emissions. Construction-related daily emissions would not exceed the SCAQMD's regional significance threshold for NOx with mitigation. As such, impacts from the proposed Project would be less than significant with mitigation and would not result in a cumulatively considerable increase of NOx during the construction period.

Unmitigated construction activities would potentially exceed the 1-hour NO_2 State threshold and the 1-hour NO_2 federal threshold at nearby receptors. However, implementation of **MM AQ-1** would reduce potential construction-related daily emissions for the proposed Project below the 1-hour NO_2 State threshold and the 1-hour NO_2 federal threshold., As such, the construction related activities would be less than significant with mitigation. All other pollutant emissions during construction would fall below the thresholds and cumulative impacts would be less than significant.

The maximum cancer risk from unmitigated proposed Project construction emissions for existing and proposed residential receptors would be potentially above the SCAQMD threshold of 10 per one million persons. However, implementation of **MM AQ-1** would reduce potential construction-related emissions for the proposed Project below the 10 per one million persons threshold. Thus, the cancer risk for existing

145 SCAQMD, Air Quality Analysis Guidance Handbook, http://www.aqmd.gov/CEQA/hdbk.html. Accessed September 2021

and proposed residential receptors due to construction activities would be less than significant with mitigation for all residential receptors due to construction activities.

Based on SCAQMD methodology, the proposed Project construction emissions would represent a considerable contribution to a cumulative impact, resulting in a potentially significant and unavoidable cumulative impact.

4.2.8.2 Operation

Modeling of daily criteria air pollutant emissions for the six operational scenarios includes consideration of VMT with and without the proposed Project. The 2027 and 2045 scenarios include the development of the related projects identified in **Section 4.0***, 4.0.6: Cumulative Assumptions***.** In addition, the Transportation Study (see **Appendix O**) the SCAG 2020-2045 RTP/SCS [146] Socio-economic data (SED) for base year (2016) and Future baseline (2045) constrained conditions were utilized as the basis for developing the socio-economic data for use with the Inglewood Travel Demand Forecast (TDF) model. Updates to the socioeconomic data include those associated with known related projects from various cities and adjacent jurisdictions. Opening year (2027) SED database was used for the Inglewood TDF developed using interpolation of the 2016 and 2045 databases from SCAG 2020-2045 RTP/SCS data updated for related projects. Therefore, the 2027 and 2045 scenarios account for the growth associated with related project and future growth as provided by SCAG.

With the proposed Project, emissions would result in decreases for all criteria pollutants (VOC, CO, NOx, PM_{10}, $PM_{2.5}$ and SO_2) compared to existing conditions, as well as the 2027 and 2045 scenarios without the proposed Project. Thus, operations would not have a significant cumulative regional air quality impact due to criteria pollutant emissions. In fact, emissions would be reduced from existing and future 2027 and 2045 No Project scenarios. As such, cumulative impacts from Project operations would be beneficial.

4.2.9 CONSISTENCY WITH CITY GENERAL PLAN

As discussed previously under **Impact AQ-1**, the proposed Project would provide direct connections between the Metro K Line, and other transit providers as well as the City's major activity centers, such as The Forum, the LASED and HPSP including SoFi stadium, and IBEC. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce per-capita VMT. For these reasons, the proposed Project would not conflict with Inglewood General Plan policies related to air quality.

146 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, "Chapter 1," https://www.connectsocal.org/Pages/Connect-SoCal-Draft-Plan.aspx. Accessed September 2021.