

## 4.F AIR QUALITY

### 4.F.1 INTRODUCTION

This section evaluates the potential impacts on air quality resulting from implementation of the proposed TOD Plan for Downtown Inglewood and Fairview Heights including technical analyses prepared by Entech Consulting Group, for which modeling results are provided in Appendix C. This section includes the potential for the TOD Plan to conflict with or obstruct implementation of the applicable air quality plan for the South Coast Air Basin, to violate an air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors that would affect a substantial number of people. The analyses in this section evaluate both the types and quantities of air pollutant emissions that would be generated on a temporary basis due to construction and those that would be generated over the long term from solid waste management operations following implementation of the modernization program.

Emissions of greenhouse gases resulting from development pursuant to the proposed TOD Plan and impacts in relation to climate change and the goals of Assembly Bill 32 (AB 32) are presented and discussed in Section 4.G, *Greenhouse Gas Emissions*, of this EIR.

### DEFINITIONS

- **Air Basin** refers to area defined by geographic features that create a distinctive regional climate. California has 15 distinct air basins. An air basin generally has similar meteorological and geographic conditions. Implementation of the proposed TOD Plan will occur within the South Coast Air Basin.
- **Air District** refers to the body responsible for managing air quality on a regional. California is currently divided into 35 air districts. Implementation of the proposed TOD Plan will occur within the boundaries of the South Coast Air Quality Management District (SCAQMD).
- **Air Pollutants** are the foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation, and/or materials.
- **Ambient Air Quality** represents existing air conditions in a given area.
- **Ambient Air Quality Standards** are the health and welfare based standards prescribed by the Environmental Protection Agency and the California Air Resources Board for outdoor air that identify the maximum acceptable average concentrations of air pollutants during a specified period of time.
- **Attainment** refers to regions that are meeting the primary standards established by EPA within the national ambient air quality standards (NAAQS) for six major pollutants termed criteria pollutants, based on data collected at permanent monitoring stations.
- **AQMP (Air Quality Management Plan)** refers to the plan prepared by the SQAQMD for the purpose of bringing the area into compliance with the requirements of the national and

California Ambient Air Quality Standards. AQMPs are incorporated into the State Implementation Plan (SIP).

- **Area Sources** of pollution include emissions that are spread over a wide area, such as consumer products, fireplaces, road dust, and farming operations.
- **Criteria Air Pollutants** are those for which acceptable levels of exposure have been determined and for which an ambient air quality standard has been set by the California Air Resources Board. Such standards have been set for six criteria pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM), which consists of PM that is 10 microns in diameter or less (PM<sub>10</sub>) and PM that is 2.5 microns in diameter or less (PM<sub>2.5</sub>).
- **Mobile Sources** refers to sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes that emit air pollutants while moving and when stopped.
- **Nonattainment** refers to regions that are not meeting the primary standards established by EPA within the national ambient air quality standards (NAAQS) for six major pollutants termed criteria pollutants, based on data collected at permanent monitoring stations.
- **Sensitive Receptors** include land uses, such as residences, schools, hospitals, children's day care facilities, elderly care facilities, and similar uses that are particularly sensitive to adverse air quality. A sensitive receptor also includes sensitive populations such as asthmatics, children, and the elderly who are particularly sensitive to air pollution.
- **Stationary Sources** include non-mobile sources such as power plants, refineries, and manufacturing facilities that emit air pollutants from a fixed location.
- **Toxic air contaminants** are defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health.

#### 4.F.2 APPLICABLE PLANS, POLICIES, AND REGULATIONS

Implementation of the proposed TOD Plan for Downtown Inglewood and Fairview Heights is subject to a range of federal, state, regional, and local plans, policies, and regulations, which are described below.

#### FEDERAL PLANS, POLICIES, AND REGULATIONS

##### Clean Air Act

The 1970 Clean Air Act (last amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all standards by the deadlines specified in the Clean Air Act. These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or

exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. **Table 4.F-1** identifies National Ambient Air Quality Standards established by the US Environmental Protection Agency pursuant to the Clean Air Act for the following criteria air pollutants: ozone, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. These criteria pollutants are described below.

- **Sulfur Dioxide.** SO<sub>2</sub> is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO<sub>2</sub> oxidizes in the atmosphere, it forms sulfur trioxide (SO<sub>3</sub>). Collectively, these pollutants are referred to as sulfur oxides (SO<sub>x</sub>).

Major sources of SO<sub>2</sub> include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of SO<sub>2</sub> aggravate lung diseases, especially bronchitis. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. SO<sub>2</sub> potentially causes wheezing, shortness of breath, and coughing. Long-term SO<sub>2</sub> exposure has been associated with increased risk of mortality from respiratory or cardiovascular disease.

- **Carbon Monoxide.** CO is a colorless and odorless gas, is a relatively non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicles. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, lower emissions from new vehicles, and improvements in fuels.
- **Nitrogen Dioxide.** NO<sub>2</sub> is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO<sub>2</sub>. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO<sub>2</sub>. The combined emissions of NO and NO<sub>2</sub> are referred to as NO<sub>x</sub>, which are reported as equivalent NO<sub>2</sub>. Aside from its contribution to ozone formation, NO<sub>2</sub> can increase the risk of acute and chronic respiratory disease and reduce visibility. NO<sub>2</sub> may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.
- **Ozone.** Ozone is the main component of photochemical smog, and is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) or volatile organic compounds (VOCs), and oxides of nitrogen (NO<sub>x</sub>). While both ROGs and VOCs refer to compounds of carbon, ROG is a term used by CARB and is identified based on a list of carbon compounds that exempts carbon compounds determined by CARB to

be nonreactive. VOC is a term used by the USEPA and is identified based on USEPA's separate list of exempted compounds it identifies as having negligible photochemical reactivity. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone concentrations are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once ozone is formed it remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth (rainout), or absorption by water molecules in clouds that later fall to earth with rain (washout).

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

- **Particulate Matter.**  $PM_{10}$  and  $PM_{2.5}$  consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter).  $PM_{10}$  and  $PM_{2.5}$  represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Particulate matter can also damage materials and reduce visibility. One common source of  $PM_{2.5}$  is diesel exhaust emissions.

$PM_{10}$  consists of particulate matter emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust) and particulate matter formed in the atmosphere by condensation and/or transformation of  $SO_2$  and ROG. Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots.  $PM_{10}$  and  $PM_{2.5}$  are also emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning.  $PM_{2.5}$  can also be formed through secondary processes such as airborne reactions with certain pollutant precursors, including ROGs, ammonia ( $NH_3$ ),  $NO_x$ , and  $SO_x$ .

- **Lead.** Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories, stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles.

Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry. In the Basin, atmospheric lead is generated almost entirely by the combustion of leaded gasoline and contributes less than one percent of the material collected as total suspended particulates. As lead has been well below regulatory thresholds for decades and the proposed TOD Plan would not be a significant source of lead, lead is not discussed further in this analysis.

The Clean Air Act also requires each state to prepare a state implementation plan (SIP). The Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air

**TABLE 4.F-1  
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time <sup>a</sup>	State Standard	National Standard	Pollutant Health And Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	High concentrations can directly affect lungs, causing irritation. long-term exposure may cause damage to lung tissue.	Formed when ROG and Nox react in sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/industrial equipment.
	8 hours	0.070 ppm	0.075 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	annual arithmetic mean	0.030 ppm	0.053 ppm		
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Van yellow plant leaves, Destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	annual arithmetic mean	---	0.030 ppm		
Respirable Particulate Matter (Pm10)	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust/-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, natural sources (e.g., wind-raised dust).
	annual arithmetic mean	20 µg/m <sup>3</sup>	---		
Fine Particulate Matter (Pm2.5)	24 hours	---	35 µg/m <sup>3</sup>	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; formed from photochemical reactions of other pollutants (Nox, sulfur oxides, and organics).
	annual arithmetic mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>		
Lead (Pb)	30 day average	1.5 µg/m <sup>3</sup>	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	calendar quarter	---	1.5 µg/m <sup>3</sup>		
	rolling 3-month average	---	0.15 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 hour	0.03 ppm	no national standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	Geothermal power plants, petroleum production and refining.
Sulfates (SO <sub>4</sub> )	24 hour	25 µg/m <sup>3</sup>	no national standard	Decreases ventilatory functions; aggravates asthmatic symptoms and cardio-pulmonary disease; vegetation damage; degrades visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hour	extinction of 0.23/km; visibility of 10 miles or more	no national standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM2.5.

Pollutant	Averaging Time <sup>a</sup>	State Standard	National Standard	Pollutant Health And Atmospheric Effects	Major Pollutant Sources
Vinyl Chloride	24 hour	0.01 ppm	no national standard	Short-term exposure to high levels of vinyl chloride can cause dizziness, drowsiness, and headaches. Long-term exposure through inhalation and oral exposure can cause liver damage. Cancer via inhalation. Exposure increases risk of angiosarcoma, a rare form of liver cancer.	Polyvinyl chloride (pvc) plastic and vinyl products.

Source: Entech Consulting Group, 2016

basins, as reported by their jurisdictional agencies. USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the Clean Air Act, and to determine whether implementing the SIPs would achieve air quality goals. In addition, the USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

## STATE PLANS, POLICIES, AND REGULATIONS

### California Clean Air Act

In 1988, the state legislature passed the California Clean Air Act, which established California's air quality goals, planning mechanisms, regulatory strategies, and standards of progress for the first time. The California Clean Air Act provides the state with a comprehensive framework for air quality planning regulation and sets state air quality standards. The California Ambient Air Quality Standards, also shown in Table 4.F-1, incorporate additional standards for most of the criteria pollutants and has set standards for other pollutants recognized by the state such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. In general, the state standards are more health protective than the federal standards.

The California Clean Air Act requires each air district in which state air quality standards are exceeded to prepare a plan that documents reasonable progress towards attainment.

### State Implementation Plan

The 1977 Clean Air Act Amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. For areas that are designated "nonattainment" with respect to a standard, the Clean Air Act specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Similarly, the 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated nonattainment in order to ensure continued attainment of the standards.

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### **Toxic Air Contaminants**

TACs have been regulated under federal air quality law since the 1977 federal Clean Air Act Amendments. The most recent federal Clean Air Act Amendments (1990) reflect a technology-based approach for reducing TACs. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). The MACT standards vary depending on the type of emitting source. USEPA has established MACT standards for over 20 facilities or activities, such as perchloroethylene dry cleaning and petroleum refineries. The second phase of control involves determining the residual health risk represented by air toxics emissions sources after implementation of MACT standards.

Two principal laws provide the foundation for state regulation of TACs from stationary sources. In 1983, the State Legislature adopted Assembly Bill 1807, which established a process for identifying TACs and provided the authority for developing retrofit air toxics control measures on a statewide basis. Air toxics from stationary sources in California are also regulated under Assembly Bill 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987. Regulation of TACs from mobile sources has traditionally been implemented through emissions standards for on-road motor vehicles (imposed on vehicle manufacturers) and through specifications for gasoline and diesel fuel sold in California (imposed on fuel refineries and retailers), rather than through land use decisions, air quality permits, or regulations addressing how motor vehicles are used by the general public.

In August 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB, 2000). This document provides a plan to reduce diesel particulate emissions, with the goal of reducing emissions and the associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

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### **ARB Regulation for Existing Off-Road Diesel Vehicles**

On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter and NO<sub>x</sub> emissions from existing (in-use) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule, with fines up to \$10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet’s average NO<sub>x</sub> emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

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### **Air Quality Land Use Handbook**

The Air Quality Land Use Handbook: A Community Health Perspective (2005) provides California Air Resources Board's (ARB) recommendations for the siting of new sensitive land uses (i.e., residences, schools, daycare centers, playgrounds, and medical facilities) near recognized major sources of TACs (e.g., freeways, large warehouses/distribution centers, rail yards, etc.).

As part of the Community Health Program, the ARB has developed an Air Quality and Land Use Handbook, which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new development projects. The ARB is also developing related information and technical evaluation tools for addressing cumulative air pollution impacts in a community. These tools, when completed, will be available through the ARB's Internet site or in the form of future supplements. The recommendations and considerations contained in the Handbook are voluntary, and do not constitute a requirement or mandate for either land use agencies or local air districts.

The Handbook identifies solid waste transfer and recycling facilities as a potential source of diesel particulate emissions. Since these types of facilities are subject to air permits from local air districts, the Handbook does not provide guidance for separation of sensitive uses from such facilities, and instead suggests that facility specific information be relied upon in relation to separation between sensitive uses and such facilities.

The Handbook identifies solid waste transfer and recycling facilities as a common source of odor complaints received by local air districts, noting that complaints about odors are the responsibility of local air districts and are also covered under state law. Because of the subjective nature of an individual's sensitivity to a particular type of odor, the Handbook states that there is no specific rule for assigning appropriate separation of sensitive uses from odor sources.

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## **REGIONAL PLANS, POLICIES, AND REGULATIONS**

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### **South Coast Air Quality Management District (SCAQMD)**

SCAQMD is the regional agency responsible for air quality regulation within the South Coast Air Basin, which encompasses all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties (an area of 10,743 square miles). SCAQMD is responsible for managing ambient air quality and setting regulations in the South Coast Air Basin, establishing an air quality monitoring network for measuring levels of criteria pollutants, administering funds to reduce regional mobile source emissions, and permitting stationary air pollutant sources. SCAQMD has permit authority over most types of stationary emission sources; can require stationary sources to obtain permits; and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. SCAQMD regulates new or expanding stationary sources of toxic air contaminants.



### South Coast Air Quality Management Plan

The SCAQMD is responsible for developing and adopting an Air Quality Management Plan (AQMP), which serves as guidance to bring the region into compliance with federal and state air quality standards. The plan includes rules to reduce emissions from various sources, including specific types of equipment, industrial processes, paints, solvents, and other consumer products.

The most recent AQMP was adopted by the SCAQMD Governing Board on December 12, 2012. The purpose of the 2012 AQMP for the South Coast Air Basin is to set forth a comprehensive and integrated program to obtain regional compliance with the federal 24-hour  $PM_{2.5}$  air quality standard, and to provide an update to the SCAB's commitment towards meeting the federal 8-hour ozone standards (SCAQMD, 2013b). The AQMP would also serve to satisfy recent USEPA requirements for a new attainment demonstration of the revoked 1-hour ozone standard, as well as a vehicle miles travelled (VMT) emissions offset demonstration. Specifically, the AQMP would serve as the official SIP submittal for the federal 2006 24-hour  $PM_{2.5}$  standard, for which USEPA has established a due date of December 14, 2012. In addition, the AQMP updates specific new control measures and commitments for emissions reductions to implement the attainment strategy for the 8-hour ozone SIP. The 2012 AQMP sets forth programs which require integrated planning efforts and the cooperation of all levels of government: local, regional, state, and federal. A Supplement to the 2012 AQMP was prepared to demonstrate attainment of the 24-hour  $PM_{2.5}$  standard by 2015. The SCAQMD Governing Board approved the Supplement on February 5, 2015, which was also approved by CARB and the USEPA as part of the California SIP (SCAQMD 2016).

### SCAQMD Rules and Regulations

All development projects are subject to SCAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction anticipated under the proposed TOD Plan are described below.

- **Rule 401 – Visible Emissions.** 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 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- **Rule 402 – Nuisance.** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust.** SCAQMD Rule 403 governs emissions of fugitive dust during and after construction. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, 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.

Rule 403 requires project applicants to control fugitive dust using the best available control measures such that dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a, offsite nuisance. Applicable Rule 403 dust suppression (and PM<sub>10</sub> generation) techniques to reduce impacts on nearby sensitive receptors may include, but are not limited to, the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
  - Water active sites at least three times daily. Locations where grading is to occur shall be thoroughly watered prior to earthmoving.
  - Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
  - Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
  - Suspend all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
  - Provide bumper strips or similar best management practices where vehicles enter and exit the construction site onto paved roads, or wash off trucks and any equipment leaving the site each trip.
  - Replant disturbed areas as soon as practical.
  - Sweep onsite streets (and offsite streets if silt is carried to adjacent public thoroughfares) to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.
- **Rule 445 – Wood Burning.** This rule prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.
  - **Rule 481 – Spray Coating.** This rule applies to all spray painting and spray coating operations and equipment and states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:
    - The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
    - Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
    - An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

- **Rule 1108 - Volatile Organic Compounds.** This rule governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the Basin. This rule also regulates the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.
- **Rule 1113 – Architectural Coatings.** No person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in a table incorporated in the rule.
- **Rule 1143 – Paint Thinners and Solvents.** This rule governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.
- **Rule 1186 – Fugitive Dust.** This rule limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.
  - **Rule 1303 – Major Emission Sources.** This rule governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM<sub>10</sub> among other pollutants.
  - **Rule 1401– New Source Review of Toxic Air Contaminants.** This rule specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.
  - **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities.** This rule provides work practice requirements to limit asbestos emissions from demolition and renovation activities associated disturbance of asbestos containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and land filling requirements for asbestos containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

### 4.F.3 ENVIRONMENTAL SETTING

#### REGIONAL SETTING

The ambient concentrations of air pollutants within the South Coast Air Basin are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute the emissions. Air quality conditions are generated by topography, wind speed, wind direction, air temperature gradients, and emissions released by air pollutant sources, which interact to move and disperse air pollutants.

The TOD Plan areas are located within South Coast Air Basin. The South Coast Air Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. Its topography and climate make it an area of high air pollution potential. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation, and sunlight triggers the photochemical reactions that produce ozone.

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## LOCAL SETTING

SCAQMD maintains monitoring stations within district boundaries that monitor air quality and compliance with associated ambient standards. The City of Inglewood is located in the Source Receptor Area (SRA) 3, Southwest Coastal LA County. The closest air monitoring station to the TOD Plan areas is the LAX Hastings monitoring station (7201 W Westchester Parkway) that monitors O<sub>3</sub>, CO, SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub>. The Los Angeles County Station 1 (1305 E Pacific Coast Highway, Long Beach) is the closest site to the project area that monitors PM<sub>2.5</sub>. Concentrations from the monitoring stations for the most recent three years (2012 – 2014) are shown in **Table 4.F-2**.

Both CARB and USEPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment. The current attainment status for the South Coast Air Basin is provided in **Table 4.F-3**.

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## TOXIC AIR CONTAMINANTS

Concentrations of toxic air contaminants, or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A toxic air contaminant is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to *The California Almanac of Emissions and Air Quality* (CARB, 2009), the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel particulate matter). Diesel particulate matter differs from other toxic air contaminants in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel particulate matter 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.

**TABLE 4.F-2  
AREA AIR QUALITY (2012 – 2014)**

Pollutant	Monitoring Data By Year			
	Standard	2012	2013	2014
<b>OZONE</b>				
Highest 1 hour average (ppm)		0.106	0.105	0.114
Days over state standard	0.09 ppm	1	1	1
Highest 8 hour average (ppm)		0.075	0.081	0.080
Days over federal standard	0.075 ppm	0	1	3
Days over state standard	0.070 ppm	1	1	6
<b>CARBON MONOXIDE</b>				
Highest 8 hour average (ppm)		2.5	2.5	1.9
Days over federal standard	9.0 ppm	0	0	0
Days over state standard	9.0 ppm	0	0	0
<b>NITROGEN DIOXIDE</b>				
Highest 1 hour average (ppb)		0.062	0.078	0.087
Days over federal standard	0.100 ppm	0	0	0
Days over state standard	0.18 ppm	0	0	0
Annual average (ppb)		0.010	0.012	0.012
Days over federal standard	0.053 ppm	0	0	0
Days over state standard	0.030 ppm	0	0	0
<b>SULFUR DIOXIDE</b>				
Highest 1 hour average (ppm)		0.01	0.01	0.02
Days over federal standard	0.14 ppm	0	0	0
Days over state standard	0.04 ppm	0	0	0
<b>PARTICULATE MATTER (PM<sub>10</sub>)</b>				
Highest 24 hour average ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>		31	38	46
Days over federal standard (measured) <sup>c</sup>	150 $\mu\text{g}/\text{m}^3$	0	0	0
Days over state standard (measured) <sup>c</sup>	50 $\mu\text{g}/\text{m}^3$	9	6	6
Annual average ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>	20 $\mu\text{g}/\text{m}^3$	19.8	20.8	22.0
<b>PARTICULATE MATTER (PM<sub>2.5</sub>)</b>				
Highest 24 hour average ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>		49.8	47.2	51.5
Days over federal standard (measured) <sup>c</sup>	35 $\mu\text{g}/\text{m}^3$	4	0	0
Annual average ( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup>		10.37	11.34	11.42

NOTES:

ppm = parts per million;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>a</sup> Generally, state standards and national standards are not to be exceeded more than once per year.

<sup>b</sup> Values represent federal statistics and are midnight-to-midnight 24-hour averages. State and federal statistics may differ because of different sampling methods.

<sup>c</sup> Measurements are usually collected every six days. Days over the standard represent the measured number of days that the standard has been exceeded.

Source: SCAQMD, 2012, 2013, 2014.

**TABLE 4.F-3  
SOUTH COAST AIR BASIN ATTAINMENT STATUS**

Pollutant	Attainment Status	
	Federal Standards	State Standards
<b>Pollutant</b>	<b>Federal Standards</b>	<b>State Standards</b>
<b>Ozone (1-hour)</b>	Non-attainment/Extreme	Non-attainment
<b>Ozone (8-hour)</b>	Non-attainment/Extreme	Non-attainment
<b>PM<sub>10</sub></b>	Attainment/Maintenance	Non-attainment
<b>PM<sub>2.5</sub></b>	Non-attainment	Non-attainment
<b>Carbon Monoxide</b>	Attainment/Maintenance	Attainment
<b>Nitrogen Dioxide</b>	Attainment/Maintenance	Attainment
<b>Sulfur Dioxide</b>	Attainment	Attainment
<b>Sulfates</b>	N/A	Attainment
<b>Lead</b>	Non-attainment	Non-attainment
<b>Hydrogen Sulfide</b>	N/A	Attainment
<b>Visibility Reducing Particles</b>	N/A	Attainment
<b>Vinyl</b>	N/A	Attainment

Source: CARB, 2016

Unlike the other toxic air contaminants, no ambient monitoring data are available for diesel particulate matter because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a particulate matter exposure method. This method uses the CARB emissions inventory's PM<sub>10</sub> database, ambient PM<sub>10</sub> monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel particulate matter, the toxic air contaminants for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Stationary source toxic air contaminants tend to be approximately the same level year-round. However, toxic air contaminants from mobile sources tend to be higher during the fall and winter months (SCAQMD, 2000). According to the MATES III Model Estimated Carcinogenic Risk, the TOD Plan area is within 5 cancer risk zones where risk ranges from 500 in one million to 1,200 in one million. The TOD Plan area is identified as having a cancer risk of 885 in one million, which is largely due to diesel particulate emissions from area roadways and freeways (SCAQMD, 2016).

## ODOR EMISSIONS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Offensive odors are unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and

intensity of the source, wind speed, direction, and the sensitivity of receptors. There are no existing land uses in the TOD Plan area that generate noxious odorous emissions.

#### 4.F.4 SIGNIFICANCE CRITERIA

Criteria outlined in CEQA Guidelines were used to determine the level of significance of air quality impacts. Appendix G of state CEQA Guidelines indicates that a project would have a significant effect if it were to:

- 4.F-1 Conflict with or obstruct implementation of the applicable air quality plan;
- 4.F-2 Violate any air quality standard, contribute substantially to an existing or projected air quality violation;
- 4.F-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- 4.F-4 Expose sensitive receptors to substantial pollutant concentrations; or
- 4.F-5 Create objectionable odors affecting a substantial number of people.

#### 4.F.5 PROJECT IMPACTS AND MITIGATION MEASURES

**Threshold 4.F-1: Conflict with or obstruct attainment of the applicable air quality plan.**

**Impact 4.F-1: Implementation of the proposed TOD Plan would be consistent with the Air Quality Management Plan for the South Coast Air Basin. Therefore, *no impacts* would occur.**

##### *Methodology*

As described above, the TOD Plan areas are located in the South Coast Air Basin, which is within the jurisdictional boundaries of the SCAQMD. The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the regional Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality in the Air Basin.

Projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered to be consistent with the AQMP growth projections, since the SCAG forecast assumptions form the basis of the land use and transportation control portions of the AQMP. SCAG's regional growth forecasts are based upon, among other things, land uses designated in local general plans.

SCAQMD's CEQA Handbook suggests an evaluation of the following two criteria to determine whether a project involving a legislative land use action (such as the proposed TOD Plan) would be consistent or in conflict with the AQMP:

1. The project would not generate population and employment growth that would be inconsistent with SCAG's growth forecasts.
2. The project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecasts and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, if the uses and level of housing and employment growth of the proposed TOD Plan are consistent with the applicable assumptions used in the development of the AQMP, the Plan would not jeopardize attainment of the air quality levels identified in the AQMP, even if emissions would exceed the SCAQMD's recommended daily emissions thresholds.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards. The SCAQMD has identified CO as the best indicator pollutant for determining whether air quality violations would occur since it is most directly related to automobile traffic, the emissions of which have been modeled by the SCAQMD to determine future air quality conditions. Thus, a CO hot spot analysis would be undertaken to determine whether air quality violations would occur as the result of the proposed TOD Plan.

### *Impact Assessment*

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Build out of the TOD Plan would result in a net increase of 2,693 residential units, representing a population of approximately 6,514 persons, and 5,640 employees at buildout and full occupancy. This consists of 38.5 percent of the City's projected population increase and a 57.8 percent of the City's projected household increase, which would be within SCAG's growth projections and be consistent with the AQMP, as detailed in Section 4.B, *Population and Housing*.

In addition, the TOD Plan implements infill development, located in an urbanized area with existing infrastructure, near the Metro stations. Build out of the TOD Plan would result in an improvement in the jobs-household ratio from 0.8 to 1.86 jobs per household. Thus, the TOD Plan would support AQMP objectives to reduce trips and balance jobs and housing, and would aid in the implementation of the AQMP.

By implementing infill development, the TOD Plan would utilize existing infrastructure such as roadways, drainage, sewer and other infrastructure, and would be consistent with the SCAG objective to "Encourage patterns of urban development and land use that reduce costs in infrastructure construction and make better use of existing facilities." The TOD Plan would also be consistent with SCAG's objective to reduce vehicle use and promote infill development. As a result, the TOD Plan would comply with Consistency Criterion No. 1 listed above in the Methodology Section.



In regard to Consistency Criterion No. 2, which evaluates the potential of the proposed TOD Plan to increase the frequency or severity of existing air quality violations, the CO hotspot screening analysis (described as part of Impact 4.F-2, below) indicates that the TOD Plan would not result in a violation of the state one-hour or eight-hour CO concentration standards and no significant adverse impacts are anticipated. Therefore, the TOD Plan is consistent with Consistency Criterion No.2, and impacts related to conflict with or obstruction with an applicable air quality plan would not occur.

#### *Significance Conclusion for Impact 4.F-1*

Overall, implementation of the TOD Plan would be consistent Consistency Criteria Nos. 1 and 2. The TOD Plan would support AQMP objectives to reduce trips and balance jobs and housing. Therefore, the TOD Plan would assist in implementing the AQMP, and impacts related to conflict or obstruction of the AQMP would not occur. No mitigation measures are necessary.

**Threshold 4.F-2:** Violate any air quality standard, contribute substantially to an existing or projected air quality violation, or result in cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment.

**Impact 4.F-2:** Implementation of the proposed TOD Plan would result in the emission of criteria pollutants during construction and ongoing operations. Total daily construction emissions would exceed applicable thresholds. However, with compliance with applicable SCAQMD rules and implementation of EIR Mitigation Measures, impacts would be *reduced to less than significant*. Local construction emissions and operational emissions would be below applicable thresholds, and would be considered to be *less than significant*.

#### *Methodology*

##### Construction Impacts

Because of the uncertainty of the specific timing and methods of construction activities for future site-specific development projects that would occur under the proposed TOD Plan, a worst-case construction scenario is analyzed in this EIR. Buildout of the TOD Plan is anticipated to occur over 20 years, with the location, type, and timing of site-specific development projects and construction activities determined by market demand. It was conservatively assumed that up to 10 percent of new development could occur in any given year. Although construction activities for that level of development would not necessarily occur on any given day, it is also conservatively assumed that up to 10 percent of new development could occur on the peak construction day during the 20-year buildout of the TOD Plan. Based on the size of existing parcels and development sites within the Downtown Inglewood and Fairview Heights areas, an estimate can also be made of the number of project-related construction sites that might be active on the theoretical “maximum construction day.”

Given a 20-year buildout, it is conservatively estimated that approximately 10 percent of project-related development might be undergoing some stage of development (demolition, site preparation, and construction) on the theoretical “maximum construction day.” Anticipated development activities during the theoretical “maximum construction day” are thus indicated in Table 4.F-4, and analyzed below.

**TABLE 4.F-4  
THEORETICAL MAXIMUM CONSTRUCTION DAY**

	RESIDENTIAL UNITS	NON-RESIDENTIAL SQUARE FOOTAGE	ACRES	# of SITES
<b>DOWNTOWN INGLEWOOD</b>				
Demolition (buildings)	4	86,200		2
Site Preparation (clearing and grading)			8.2	3
Construction (Buildings)	255	231,075		2
(Paving of Parking and Roads)			5.9	3
<b>FAIRVIEW HEIGHTS</b>				
Demolition (buildings)	4	12,600		2
Site Preparation (clearing and grading)			3.0	2
Construction (Buildings)	50	40,800		2
(Paving of Parking and Roads)			1.1	3
<b>PROJECT TOTAL</b>				
Demolition (buildings)	8	98,800		4
Site Preparation (clearing and grading)			11.2	5
Construction (Buildings)	305	271,875		4
(Paving of Parking and Roads)		127,400		6

Source: The Arroyo Group, Metis Environmental Group (2016).

Construction was assumed to involve the demolition of existing buildings, site grading, building construction, paving and architectural coating. SCAQMD Rule 402 identifies standards to reduce quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property. SCAQMD Rule 403 regulates operations, which periodically may cause fugitive dust emissions into the atmosphere. Unmitigated emissions take into account the requirements under SCAQMD Rule 403.

SCAQMD Rule 1108 governs the VOC content of asphalt, Rules 1113 and 1143 that govern the VOC content in architectural coating, paint, thinners, and solvents, was accounted for in the construction emissions modeling. Furthermore, the use of low VOC coatings was included to reduce the ROG emissions that would be generated from the application of architectural coating.

It is mandatory for all construction projects within the South Coast Air Basin to comply with SCAQMD Rule 403 for fugitive dust that include, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the construction site, and maintaining effective cover over exposed areas

Construction scheduling was based on CalEEMod defaults and typical construction scheduling, and CalEEMod default equipment was used. The emissions estimates are based on the estimate of 10 percent of the net development could occur in any given year. Due to the changeover in construction fleets as old equipment is replaced with new, it is anticipated that maximum daily emissions would decrease as development occurs in future years.

In addition, to determine whether or not construction activities associated with the proposed TOD Plan would create significant adverse localized air quality impacts on nearby sensitive receptors, the worst-case daily emissions contribution from the proposed TOD Plan were compared to SCAQMD's localized significance thresholds (LSTs). The analysis of localized air quality impacts focuses only on the onsite activities of a project, and does not include emissions that are generated off-site such as from on-road haul or delivery truck trips (SCAQMD, 2009).

For the purpose of analyzing localized air quality impacts, SCAQMD has developed LSTs for three project site sizes: 1 acre, 2 acres and 5 acres. The LSTs established for each of the site acreages represent the amount of pollutant emissions that would not exceed the most stringent applicable federal or state ambient air quality standards. The LST threshold for a one-acre site was used because developments under the proposed TOD Plan could be a variety of sizes, and the one-acre LST threshold is the smallest developed by SCAG. The SCAQMD only provides LSTs at receptor distances of 82, 164, 328, 656, and 1,640 feet from the emissions source, the LSTs for a receptor distance of 82 feet from the project site is used for determining significance because projects implemented under the TOD plan could be adjacent to existing sensitive receptors, and the LST receptor distance of 82 is the closest identified by SCAQMD thresholds.

In conducting the localized air quality analysis, which focuses only on onsite emissions, the project's onsite construction emissions generated from combustion sources (e.g., off-road construction equipment) under a worst-case construction scenario were extracted from the CalEEMod model run outputs. Overall, the daily total onsite combustion, mobile, and fugitive dust emissions associated with project construction were combined and evaluated against SCAQMD's LSTs for a one-acre site. CalEEMod data is provided in the Appendix C.

### Operations Impacts

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Operations emissions associated with the proposed TOD Plan were modeled using CalEEMod. Model defaults were adjusted to reflect TOD Plan-specific data, where available, including the size and type of the proposed land use and project specific trip rates.

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors associated with the proposed TOD Plan, including mobile- and area-source emissions, were also quantified using the

CalEEMod computer model. Area-source emissions, which are widely distributed and made of many small emissions sources (e.g., building heating and cooling units, landscaping equipment, consumer products, painting operations, etc.), were modeled according to the size and type of land use proposed. Mass mobile-source emissions were modeled based on the daily vehicle trips that would result from the proposed TOD Plan.

Project trip generation rates were available from the Traffic Study prepared for the TOD Plan by Iteris (Iteris, 2016). In addition, as the TOD Plan area is currently occupied by various residential, commercial, institutional, and industrial land uses, some of which would remain, some of which would be removed and reconstructed as a new or expanded land use by the proposed TOD Plan. New and renovated structures that are developed by implementation of the TOD Plan would have a decreased emissions envelope because new regulatory requirements that include the CALGreen requirements that were implemented in 2013. The net increase in long-term operational emissions that would be generated by build out of the proposed TOD Plan was compared with the applicable SCAQMD thresholds for determination of significance.

Localized air quality impacts during operation of the proposed TOD Plan are also analyzed by extracting the onsite operational emissions from the CalEEMod model run for build out of the TOD Plan and evaluating those emissions against SCAQMD's applicable operational LSTs. As with construction LST analysis, only onsite- emissions are used in determining a project's potential to impact local air quality for  $\text{NO}_x$ , CO,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$ .

The analysis discusses impacts from toxic air contaminants on a qualitative basis based on compliance with the screening levels. If implementation of the TOD Plan exceeds the screening levels, then dispersion modeling would be necessary to determine the potential impacts on localized receptor.

### *Impact Assessment*

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#### Construction Impacts

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Construction activities would occur intermittently at different sites within the TOD Plan areas throughout the anticipated 20-year build out. Although the related impacts at any one location would be temporary, construction of individual site-specific development projects under the proposed TOD Plan could cause adverse effects on local air quality. Construction activities could generate substantial amounts of dust (including  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ ) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) and other criteria air pollutants primarily from the operation of heavy equipment construction machinery (primarily diesel operated) and construction worker automobile trips (primarily gasoline operated).

Fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the prevailing weather. Sources of fugitive dust during construction could include vehicle movement over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces.

In addition, buildings constructed prior to 1980 often contain asbestos used in insulation, fire retardants, or building materials (floor tile, roofing, etc.), as well as lead-based paint. As such,

demolition activities of such buildings could involve removal and disposal of asbestos and lead-based paint. Airborne asbestos fibers and dust from lead-based paint pose a serious health threat. The demolition, renovation and removal of asbestos-containing building materials would be subject to the requirements of SCAQMD Rule 1403, which are described above.

Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NO<sub>x</sub> from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during construction.

Mobile source emissions, primarily NO<sub>x</sub>, would result from the use of construction equipment such as graders, backhoes, and cranes. During the finishing phase, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release ROG. The assessment of construction air quality impacts considers each of these potential sources.

#### **Regional Construction Impacts- Criteria Air Pollutants**

Unmitigated daily regional construction-related emissions are presented in **Table 4.F-5**, which shows the highest daily emission estimate for each construction phase, as well as daily emissions estimate for the overlap of various construction activities on multiple sites during the maximum construction day within the proposed TOD Plan areas. As shown, when construction phases overlap, unmitigated emissions would exceed the SCAQMD daily significance thresholds. Calculations and modeling output is included in Appendix C.

Mitigated daily construction-related emissions are presented in **Table 4.F-6**, which shows that with implementation of **Mitigation Measures 4.F-2a** and **4.F-2b**, emissions would not exceed the SCAQMD daily significance thresholds on the maximum construction day.

#### **Local Construction Impacts- Criteria Air Pollutants**

As previously discussed, daily on-site construction emissions generated within the proposed TOD Plan were evaluated against SCAQMD's Local Significance Thresholds for a one-acre site to determine whether the emissions would cause or contribute to adverse localized air quality impacts. The TOD Plan would implement infill mixed use development. Therefore, it is assumed that the nearest sensitive receptor would be adjacent to the project site under construction. Since the mass rate look-up tables provided by SCAQMD indicate 82 feet as the closest receptor distance, 82 feet is used to evaluate the potential localized air quality impacts associated with the peak day construction emissions from the TOD Plan.

**TABLE 4.F-5  
CONSTRUCTION EMISSIONS - UNMITIGATED**

Construction Activity	Pollutant Estimated Maximum Daily Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	4.29	45.66	35.03	0.04	2.29	2.14
On-Road Emissions	0.07	0.08	1.04	0.00	0.17	0.05
<b>Total Emissions</b>	<b>4.35</b>	<b>45.74</b>	<b>36.07</b>	<b>0.04</b>	<b>2.46</b>	<b>2.18</b>
<b>Site Preparation:</b>						
Fugitive Dust Emissions	--	--	--	--	7.05	3.87
Off-Road Emissions	5.08	54.63	41.11	0.04	2.94	2.70
On-Road Emissions	0.08	0.10	1.25	0.00	0.23	0.06
<b>Total Emissions</b>	<b>5.16</b>	<b>54.73</b>	<b>42.35</b>	<b>0.04</b>	<b>10.21</b>	<b>6.64</b>
<b>Grading</b>						
Fugitive Dust Emissions	--	--	--	--	2.74	1.33
Off-Road Emissions	6.48	74.81	49.14	0.06	3.58	3.30
On-Road Emissions	0.09	0.11	1.39	0.00	0.23	0.06
<b>Total Emissions</b>	<b>6.57</b>	<b>74.93</b>	<b>50.52</b>	<b>0.06</b>	<b>6.55</b>	<b>4.69</b>
<b>Building Construction</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	3.41	28.51	8.51	0.03	1.07	1.86
On-Road Emissions	2.68	12.22	38.40	0.08	5.22	1.53
<b>Total Emissions</b>	<b>6.09</b>	<b>40.73</b>	<b>46.91</b>	<b>0.11</b>	<b>7.19</b>	<b>3.38</b>
<b>Paving</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	2.09	22.39	14.82	0.02	1.26	1.16
On-Road Emissions	0.07	0.08	1.04	0.00	0.17	0.05
<b>Total Emissions</b>	<b>2.16</b>	<b>22.47</b>	<b>15.86</b>	<b>0.02</b>	<b>1.43</b>	<b>1.21</b>
<b>Architectural Coating</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	0.37	2.37	1.88	0.00	0.20	0.20
On-Road Emissions	0.34	0.43	5.34	0.01	0.87	0.24
<b>Total Emissions</b>	<b>0.71</b>	<b>2.80</b>	<b>7.23</b>	<b>0.01</b>	<b>1.07</b>	<b>0.43</b>
<b>Demolition, Site Preparation, Paving, Building Construction, and Architectural Coating</b>						
<b>Total Emissions</b>	<b>25.04</b>	<b>241.40</b>	<b>198.94</b>	<b>0.30</b>	<b>28.90</b>	<b>18.53</b>
<b>Regional Significance Threshold</b>	75	100	550	150	150	55
<b>Significant Impact?</b>	No	Yes	No	No	No	No

Notes: Numbers may not add due to rounding.

See Table 4.F-3 for amount of construction activity being undertaken on the maximum construction day.

Source: Entech Consulting Group, 2016.

**TABLE 4.F-6  
CONSTRUCTION EMISSIONS - MITIGATED**

Construction Activity	Pollutant Estimated Maximum Daily Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	0.60	13.88	25.26	0.04	0.06	0.06
On-Road Emissions	0.07	0.08	1.04	0.00	0.00	0.02
<b>Total Emissions</b>	<b>0.66</b>	<b>13.96</b>	<b>26.31</b>	<b>0.04</b>	<b>0.12</b>	<b>0.08</b>
<b>Site Preparation</b>						
Fugitive Dust Emissions	--	--	--	--	1.13	0.62
Off-Road Emissions	0.71	12.38	23.40	0.04	0.06	0.06
On-Road Emissions	0.08	0.10	1.25	0.00	0.07	0.02
<b>Total Emissions</b>	<b>0.79</b>	<b>12.48</b>	<b>24.65</b>	<b>0.04</b>	<b>1.26</b>	<b>0.71</b>
<b>Grading</b>						
Fugitive Dust Emissions	--	--	--	--	0.44	0.21
Off-Road Emissions	0.98	20.29	37.94	0.06	0.10	0.10
On-Road Emissions	0.09	0.11	1.39	0.00	0.08	0.03
<b>Total Emissions</b>	<b>1.07</b>	<b>20.40</b>	<b>39.33</b>	<b>0.06</b>	<b>0.62</b>	<b>0.34</b>
<b>Building Construction</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	0.53	10.88	17.82	0.03	0.08	0.08
On-Road Emissions	2.68	12.22	38.40	0.08	2.02	0.74
<b>Total Emissions</b>	<b>3.22</b>	<b>23.10</b>	<b>56.21</b>	<b>0.11</b>	<b>2.10</b>	<b>0.82</b>
<b>Paving</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	0.33	9.83	16.93	0.02	0.04	0.04
On-Road Emissions	0.34	0.43	5.34	0.01	0.42	0.13
<b>Total Emissions</b>	<b>0.39</b>	<b>9.91</b>	<b>17.97</b>	<b>0.02</b>	<b>0.10</b>	<b>0.06</b>
<b>Architectural Coating</b>						
Fugitive Dust Emissions	--	--	--	--	--	--
Off-Road Emissions	0.05	1.06	1.83	0.00	0.00	0.00
On-Road Emissions	0.34	0.43	5.34	0.01	0.42	0.13
<b>Total Emissions</b>	<b>0.40</b>	<b>1.49</b>	<b>7.17</b>	<b>0.01</b>	<b>0.31</b>	<b>0.10</b>
<b>Demolition, Site Preparation, Paving, Building Construction, and Architectural Coating</b>						
<b>Total Emissions</b>	<b>6.53</b>	<b>81.35</b>	<b>171.64</b>	<b>0.30</b>	<b>4.52</b>	<b>2.10</b>
<b>Regional Significance Threshold</b>	75	100	550	150	150	55
<b>Significant Impact?</b>	No	No	No	No	No	No

Notes: Numbers may not add due to rounding.

See Table 4.F-3 for amount of construction activity being undertaken on the maximum construction day.

Source: Entech Consulting Group, 2016.

**Table 4.F-7** identifies the daily unmitigated, localized on-site emissions that are estimated to occur during the proposed TOD Plan's worst-case construction scenario. As shown, the daily unmitigated emissions would exceed the applicable SCAQMD Local Significance Thresholds for NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for a one-acre site in SRA 3 when more than one project is constructed at a time and when more than one project is within 82 feet of the same receptor. PM<sub>10</sub> and PM<sub>2.5</sub> emissions would exceed Local Significance Thresholds if two or more projects are constructed at the same time and within 82 feet of the same receptor. For NO<sub>x</sub>, thresholds would be exceeded if three or more projects are constructed within 82 feet of the same receptor at the same time. The emissions for the remaining pollutant of concern (CO) would not exceed the applicable SCAQMD Local Significance Thresholds under any scenario. As distances between project sites and receptors increase, the daily emissions below Local Significance Thresholds increase, and at 656 feet between construction sites and the nearest receptor, the worst case construction activities would be less than significant for all criteria pollutants of concern. However, because it is unknown how many projects would be under construction at the same time and what the distances would be between projects and the nearest receptors, a worst case assessment was assumed with respect to Local Significance Threshold impacts. As the TOD Plan's worst-case construction emissions would exceed SCAQMD's applicable Local Significance Thresholds for NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> during overlap of the various construction phases, the localized air quality impacts associated with NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> would be significant.

**TABLE 4.F-7  
LOCALIZED POLLUTANT CONCENTRATIONS FROM CONSTRUCTION EMISSIONS - UNMITIGATED**

Construction Activity	Pollutant Daily Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Demolition	45.74	36.07	2.46	2.18
Site Preparation	54.73	42.35	10.21	6.64
Grading	74.93	50.52	6.55	4.69
Building Construction	40.73	46.91	7.19	3.38
Paving	22.47	15.86	0.02	1.21
Architectural Coating	2.80	7.23	1.07	0.43
<b>Demolition, Site Preparation, Paving, Building Construction, and Architectural Coating Total</b>	<b>241.40</b>	<b>198.94</b>	<b>27.49</b>	<b>18.53</b>
<b>Regional Significance Threshold</b>				
1-acre site	91	664	5	3
2-acre site	131	967	8	5
5-acre site	197	1,796	15	8
<b>Significant Impact?</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: Numbers may not add due to rounding.

See Table 4.F-3 for amount of construction activity being undertaken on the maximum construction day.

Source: Entech Consulting Group, 2016

However, with implementation of **Mitigation Measure 4.F-2b**, total on-site emissions of NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> generated on the maximum construction day would be reduced to below the SCAQMD's applicable Local Significance Threshold. The total mitigated emissions that would result during construction activities are shown in **Table 4.F-8**.



**TABLE 4.F-8  
LOCALIZED POLLUTANT CONCENTRATIONS FROM CONSTRUCTION EMISSIONS – MITIGATED**

Construction Activity	Pollutant Daily Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Demolition	33.96	26.31	0.32	0.08
Site Preparation	12.48	24.65	1.26	0.73
Grading	20.40	39.33	0.63	0.34
Building Construction	23.10	56.21	2.10	0.82
Paving	9.91	17.97	0.10	0.06
Architectural Coating	1.49	7.17	0.31	0.10
<b>Demolition, Site Preparation, Paving, Building Construction, and Architectural Coating Total</b>	<b>81.35</b>	<b>171.64</b>	<b>4.52</b>	<b>2.10</b>
<b>Regional Significance Threshold</b>				
1-acre site	91	664	5	3
2-acre site	131	967	8	5
5-acre site	197	1,796	15	8
<b>Significant Impact?</b>	No	No	No	No

Notes: Numbers may not add due to rounding.

See Table 4.F-3 for amount of construction activity being undertaken on the maximum construction day.

Source: Entech Consulting Group, 2016.

## Operations Impacts

Implementation of the proposed TOD Plan would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, in addition to operational mobile emissions.

Operations emissions associated with the proposed TOD Plan were modeled using CalEEMod. Model defaults were adjusted to reflect project-specific data, where available, including the size and type of the proposed land use and project specific trip rates. Modeled operations emissions are presented in Table 4.F-9. Significance is determined based on the total project contribution to regional criteria pollutant emissions.

As shown in Table 4.F-9, the operational emissions of criteria pollutants that would be generated by the project would not exceed the SCAQMD's applicable thresholds.

### *Significance Conclusion for Impact 4.F-2*

Total daily construction emissions would exceed applicable thresholds, and would therefore result in a significant impact requiring mitigation. Implementation of Mitigation Measure 4.F-2a and 4.F-2b would reduce local construction emissions and operational emissions e below applicable thresholds, and impacts would be considered to be less than significant. No mitigation would be required.

**TABLE 4.F-9**  
**NET INCREASE IN OPERATIONAL EMISSIONS (lbs/day)**

Emission Sources	Pollutant					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	14.86	0.0	0.06	0.00	0.08	0.08
Energy	0.22	1.95	1.64	0.01	0.15	0.15
Mobile	16.33	47.28	184.86	0.40	27.43	7.76
<b>Total</b>	<b>31.41</b>	<b>49.23</b>	<b>186.56</b>	<b>0.41</b>	<b>27.66</b>	<b>7.99</b>
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: Entech Consulting Group, 2016.

### *Mitigation Measures*

**Mitigation Measure 4.F-2a:** All onsite vehicles and equipment used in construction within the TOD Plan areas that has horsepower greater than 50 shall meet, at a minimum, USEPA Tier IV interim engine certification requirements. If Tier IV interim equipment is not available, the contractor may apply other available technologies available for construction equipment such that it would achieve a comparable reduction in NO<sub>x</sub> and PM emissions comparable to that of Tier IV construction equipment. Where alternatives to USEPA Tier IV are utilized, the contractor shall be required to show evidence to the City that these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit.

**Implementation:** Conditions of approval for site-specific development shall include the requirements of Mitigation Measure 4.F-2a to be incorporated into construction contract documents. These contract documents shall be reviewed by the City prior to the issuance of demolition, grading, and construction contracts.

**Mitigation Measure 4.F-2b:** All active construction areas shall be watered at least four times daily to reduce fugitive dust emissions from grading, excavation, and other ground preparation. Watering shall be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water shall be used whenever it is available.

**Implementation:** Conditions of approval for site-specific development shall include the requirements of Mitigation Measure 4.F-2b to be incorporated into construction contract documents. These contract

documents shall be reviewed by the City prior to the issuance of demolition, grading, and construction contracts.

### *Conclusion with Implementation of Mitigation Measures*

With implementation of Mitigation Measures 4.F-2a and 4.F-2b, both construction and operations air emissions would be less than significant.

<b>Threshold 4.F-3:</b>	<b>Cumulatively considerable net increase in a criteria pollutant.</b>
<b>Impact 4.F-3:</b>	<b>Implementation of the proposed TOD Plan would result in an increase in emission of criteria pollutants. However, because the level of emissions would be less than significant, and TOD Plan is consistent with applicable regional plans aimed at reducing emissions of air pollutants, impacts would be <i>less than significant</i>.</b>

### *Methodology*

Because the South Coast Air Basin is currently classified as a state nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, cumulative development consisting of the proposed project along with other reasonably foreseeable future projects in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. However, based on SCAQMD's cumulative air quality impact methodology recommends that if an individual project results in air emissions of criteria pollutants (ROG, CO, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

### *Impact Assessment*

As discussed previously, the unmitigated worst-case daily construction emissions would exceed SCAQMD's construction thresholds. However, implementation of Mitigation Measures 4.F-2a and 4.F-2b would reduce impacts to less than significant, and would therefore not be cumulatively considerable.

Operational emissions associated with vehicular traffic, energy consumption and other area sources would not exceed SCAQMD daily thresholds, and would therefore not be cumulatively considerable.

The development that would occur under the TOD plan would be consistent with SCAG 2016 RTP/SCS policies that include the following (2016 RTP/SCS):

- **Identify regional strategic areas for infill and investment:** Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth. This strategy makes efficient use of existing and planned infrastructure, revitalizes communities, and maintains or improves quality of life. Strategic

areas are primarily identified as those with potential for transit-oriented development, existing and emerging centers, and small mixed-use areas.

- Develop “Complete Communities”: Create mixed-use districts or “complete communities” in strategic growth areas through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other. Focusing a mix of land uses in strategic growth areas creates complete communities wherein most daily needs can be met within a short distance of home, providing residents with the opportunity to patronize their local area and run daily errands by walking or cycling rather than traveling by automobile.
- Plan for additional housing and jobs near transit: Pedestrian-friendly environments and more compact development patterns in close proximity to transit serve to support and improve transit use and ridership. Focusing housing and employment growth in transit-accessible locations through this transit-oriented development approach will serve to reduce auto use and support more multi-modal travel behavior.

The TOD Plan provides for an infill transit oriented development that would make use of existing and planned infrastructure, revitalize the community, provide access to transit, and provide pedestrian and bicycle routes, which is intended to reduce vehicle miles travelled from development within the TOD planning areas and would in-turn reduce vehicular related emissions.

The TOD Plan also includes several sustainability features that include:

- Green Boulevards (La Brea Avenue, Florence Avenue, Manchester Boulevard and Prairie Avenue) that would increase pedestrian and bicycle safety and encourage non-vehicular travel.
- Alley walkways and mid-block pass-throughs would be designed to provide for increased use of pedestrian and bicycle travel.
- Drought-tolerant landscaping would be used on all streetscapes to reduce water consumption and energy required to transport water to the TOD planning areas.
- New structures would be designed so as to accommodate green roofs or solar installations.
- Installation of photovoltaic panels on the top floor of all parking structures for renewable energy generation.

Additionally, new development under the proposed TOD Plan would be required to meet CALGREEN/Title 24 requirements and the City’s Energy and Climate Action Plan standards that reduce energy demand from new development. Per the California Energy Commission, the CALGREEN/Title 24 standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction (CEC 2014). Typical CALGREEN measures include: insulation; use of energy-efficient heating, ventilation and air conditioning equipment (HVAC); solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; incorporation of skylights, etc.

In addition, other existing regulations are likely to result in more efficient use of all types of energy, and reduction in reliance on non-renewable sources of energy within the TOD planning areas over the next 20 plus years. These include the federal Energy Independence and Security Act and the state

Long Term Energy Efficiency Strategic Plan, which are designed to reduce reliance on non-renewable energy resources.

#### *Significance Conclusion for Impact 4.F-3*

Because emissions resulting from the proposed TOD Plan would be less than significant, and the TOD Plan is consistent with applicable regional plans aimed at reducing emissions of air pollutants, impacts would be less than significant, and no mitigation would be required.

**Threshold 4.F-4: Expose sensitive receptors to substantial pollutant concentrations.**

**Impact 4.F-4: Implementation of the proposed project TOD Plan would introduce new sensitive uses into the area. However, none of the conditions which might expose sensitive receptors to substantial pollutant concentrations would occur, and impacts would be *less than significant*.**

#### *Methodology*

In an urbanized environment, air pollutant concentrations are usually most prominent along busy streets and at busy intersections, where automotive exhausts can build up while vehicles stop and idle or slow down to approach and proceed through or make turning movements. The primary source of potential air toxics associated with operation of the proposed TOD Plan include diesel particulates from construction equipment during construction, and upon completion of construction, diesel particulates from delivery trucks (e.g., truck traffic on local streets and onsite truck idling) to the commercial, industrial, and institutional uses proposed by the TOD Plan.

ARB's Handbook includes the recommendation to avoid the siting of new sensitive land uses (e.g., residences, schools) within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. Thus, any sensitive land use proposed within 500 feet of a freeway or roadway with 100,000 vehicles/day would be subject to a health risk evaluation.

Health risk would be evaluated assuming a constant exposure to emissions of a 70-year lifetime, 24 hours a day, seven days a week. As the exposure to receptors from construction activities would be short-term and limited during infill development activities, only operational impacts would be analyzed. A significant impact would result if the health risk assessment demonstrated that the emissions levels and risks to nearby receptors would be greater than a 10 in one million increase in cancer risk, or greater than a 1 in one million increase in non-cancer risk.

#### *Impact Assessment*

Construction activities would take place intermittently as various development projects occur within the TOD Plan area throughout the 20-year build out period. Because development projects would be short-term and scattered throughout the TOD Plan area, sensitive receptors would be exposed for short-term limited time during nearby construction activities, but would not be exposed to

construction emissions over the entire TOD Plan implementation period, and could not, therefore generate emissions that would be significant over the health risk exposure period.

None of the proposed residential uses in the TOD Plan area would be located within 500 feet of a freeway. In addition, based on the projected 2040 average daily traffic (ADT) volume on roadways in the TOD Plan area, no residential uses would be located within 500 feet of an urban road with 100,000 vehicles per day. Therefore, the location of the proposed residential uses would be in concurrence with ARB recommendations. Based on the criteria in the ARB guidance document, it can be ascertained that the proposed TOD Plan would not have the potential to expose sensitive receptors to TACs from mobile sources to an extent that health risks could result. This impact would be less than significant.

Implementation of the proposed TOD Plan would also result in new land uses in the Downtown Inglewood and Fairview heights areas consisting of residential and non-residential employment generating uses that may utilize solvents, cleaners, and motor vehicle emissions, which are not anticipated to emit TAC emissions in appreciable quantities.

In addition, any commercial or industrial use that would be a stationary source of TAC emissions would be subject to the rules and regulations of SCAQMD. SCAQMD Regulation XIV (Toxics and Other Non-Criteria Pollutants), and in particular Rule 1401 (New Source Review), would require that all sources that possess the potential to emit TACs be required to obtain permits from SCAQMD. Permits are granted to these operations if they are constructed and operated in accordance with applicable regulations, including new source review standards and air toxics control measures. Thus, any new stationary source of TAC emissions would not exceed applicable health risk thresholds.

#### CO Hotspots

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CO concentration is a direct function of motor vehicle activity (e.g., idling time and traffic flow conditions), particularly during peak commute hours and certain meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. Because of reduced speeds and vehicle queuing, “hot spots” typically occur at high traffic volume intersections.

As shown in Tables 13 and 14 respectively, increases in AM and PM vehicle trips for the TOD Plan would not increase traffic volumes by 44,000 vehicle trips per hour. This number of trips would not produce the volume of peak hour traffic required to generate or contribute to a CO hotspot. Therefore, CO hotspots would not result from the proposed TOD Plan.

#### *Significance Conclusion for Impact 4.F-4*

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No sensitive uses are proposed within areas having a potential to expose sensitive receptors to TACs from mobile sources. In addition, the commercial uses proposed within the TOD areas would not be anticipated to emit TAC emissions in appreciable quantities, and any new stationary source of TAC

emissions would not be permitted to exceed applicable health risk thresholds. Thus, impacts would be less than significant, and no mitigation would therefore be required.

**Threshold 4.F-5: Create objectionable odors affecting a substantial number of people.**

**Impact 4.F-5: Implementation of the proposed TOD Plan would introduce new sensitive uses into the TOD Plan areas. However, the types of uses permitted pursuant to the TOD Plan do not include those that would generate objectionable odors that could affect a substantial number of people. Impacts would, therefore, be *less than significant*.**

### *Methodology*

The SCAQMD Air Quality Handbook identifies the following uses as having a potential odor issues: wastewater treatment plants, food processing plants, agricultural uses, chemical plants, composting, refineries, landfills, dairies, and fiberglass moldings. Introduction of any of these uses would be considered to be a significant impact.

### *Impact Assessment*

The proposed TOD Plan would develop residential, commercial, institutional, and mixed-uses that do not involve the types of uses that would emit objectionable odors affecting a substantial number of people.

In addition, odors generated that could be generated by construction activities are required to be in compliance with SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses. SCAQMD Rule 402, Nuisance, states:

*A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.*

During construction of site-specific development projects under the proposed TOD Plan, emissions from construction equipment, such as diesel exhaust, and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be temporary and localized to the construction site; and therefore, are not expected to affect a substantial number of people.

### *Significance Conclusion for Impact 4.F-5*

Because (1) no new uses are proposed within the TOD Plan areas that would emit objectionable odors that could affect a substantial number of people, (2) compliance with SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses would be required, and (3) any odors emanating from

construction sites would be temporary in nature. Impacts would be less than significant. No mitigation is therefore required.

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#### 4.F.6 REFERENCES – AIR QUALITY

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