

Appendix A: Air Quality, Greenhouse Gas Emissions, and Energy Supporting Information

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A.1 - Air Quality and Greenhouse Gas Emissions Study

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Yorba Linda In-N-Out

Air Quality and Greenhouse Gas Study

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EXECUTIVE SUMMARY

This Air Quality and Greenhouse Gas Report assesses and the potential air quality and greenhouse gas (GHG) impacts that may occur with construction and operation of the In-N-Out Burger restaurant (Project) proposed in the City of Yorba Linda (City). The analysis estimates future emission levels at surrounding land uses resulting from construction and operation of the Project and evaluates any potential for significant impacts. An evaluation of the Project's contribution to potential cumulative air quality and greenhouse gas impacts is also provided. Emission calculation worksheets are provided in **Appendix A: CalEEMod Emission Output Files**. This report also summarizes the potential for the Project to conflict with an applicable air quality plan, violate an air quality standard or threshold, result in a cumulatively net increase of criteria pollutant emissions, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people.

The findings of the analyses are as follows:

- The Project would be consistent with air quality policies set forth by the South Coast Air Quality Management District (SCAQMD) and the Air Quality Management Plan.
- Construction and operational emissions would not contribute to short- or long-term emissions that would increase the carcinogenic effects on sensitive receptors. Emissions associated with construction and operation would not exceed the SCAQMD thresholds. Thus, the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in South Coast Area Basin.
- Operation of the Project will not employ toxic air contaminant-emitting processes. No substantial pollutant concentration would be generated.
- Project construction and operations would not result in significant levels of odors.
- The Project would result in less than significant cumulative air quality impacts during construction and operation of the Project.
- The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- The Project would not conflict with applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

INTRODUCTION

This report presents the results of the technical Air Quality (AQ) and Greenhouse Gas (GHG) analysis conducted for the Project proposed in the City. The report provides a summary of the Project components; describes the existing regulatory framework for air pollutants; discusses the environmental setting of the Project; and assesses the potential environmental impacts pertaining to air quality that may result from Project implementation. Determination of significance for Project impacts is based on analysis in accordance with the applicable regulatory thresholds.

PROJECT DESCRIPTION

The 1.43 acre Project site is located at 18181 Imperial Highway, as shown in **Figure 1: Project Site Location**. The Project site is currently developed with the Yorba Linda Public Library, which would be relocated to the southeast corner of Lakeview Avenue and Lemon Drive. The existing structures and parking lots on the remaining two parcels are currently owned by the City of Yorba Linda and will be demolished prior to, and without respect to the approval of, the commencement of this project as part of the approved Yorba Linda Town Center project, which was analyzed within the Yorba Linda Town Center Addendum to the Certified EIR for the Yorba Linda Town Center Project Library and Arts Center.¹ The Project will include the construction of a new 3,974-square-foot In-N-Out Burger restaurant with a drive-through lane. All existing driveways currently serving the Yorba Linda Public Library. The restaurant would provide seating capacity of 134 (84 seats indoor, 68 seats outdoor), a 30 car drive-thru queuing lane, landscaping, and parking spaces for up to 49 vehicles. During the lunch (12:00 PM – 2:00 PM) and dinner (5:00 PM – 7:00 PM) peak periods, associates would monitor the parking lot to assure that traffic is always moving smoothly and not blocking parking spaces and/or the drive-thru lane by clearing ingress and egress drive aisles. The proposed Project is anticipated to be constructed and fully operational by Year 2021.

¹ Tebo Environmental Consulting, Inc. *Yorba Linda Town Center Addendum to the Certified EIR for the Yorba Linda Town Center Project Library and Arts Center*, accessed April 2020, http://yorbalinda.granicus.com/MetaViewer.php?view_id=4&clip_id=924&meta_id=112867

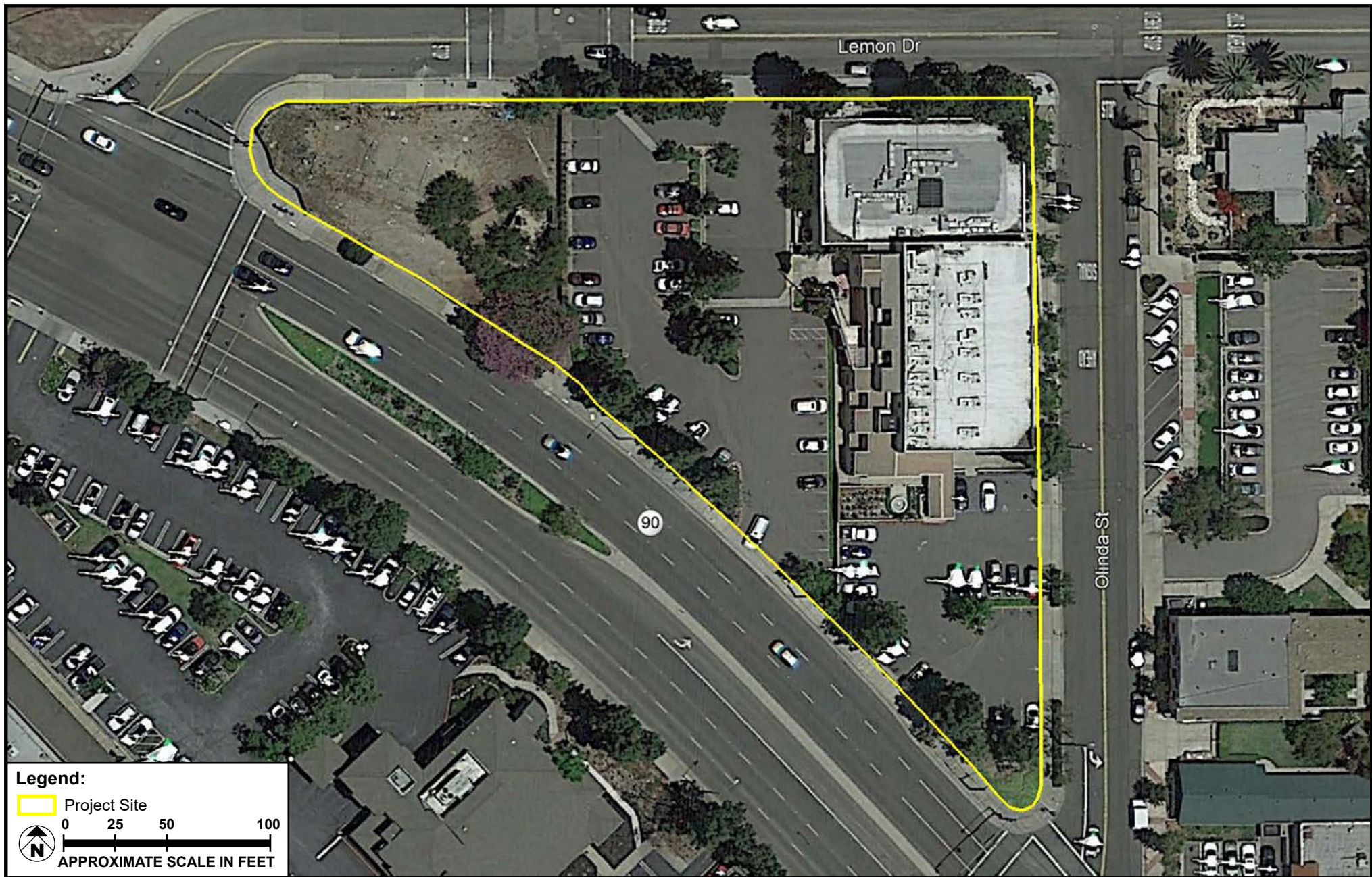


FIGURE 1

REGULATORY SETTING

Air Quality

Ambient air quality emissions present complex environmental issues that require regulatory attention on both large and small scales. The cumulative nature of project-level and localized emissions contributing to greater regional conditions warrants that regulatory policies be instituted on national, State, and regional levels to address the air quality concerns. The following sections outline the applicable regulatory framework that exists at the national, State, and regional levels for air quality.

Background

The United States Environmental Protection Agency (USEPA) is responsible for federal oversight and enforcement of air quality management policies under the 1970 Clean Air Act (CAA). Each individual state is tasked with preparing and adhering to State Implementation Plans² (SIPs) for achieving the goals set forth within the CAA. California has some of the most stringent air quality policies in the country and, through the California Air Resources Board (CARB) branch of the California Environmental Protection Agency (CalEPA), has developed its own ambient air quality standards (AAQS).

The State is divided into air quality jurisdictions; each jurisdiction is governed by a regional air district that oversees policy implementation, permitting of air pollution emission sources, and enforcement of regulatory requirements. Six criteria air pollutants (CAPs) are monitored at the federal, state, and regional levels. These six CAPs—ozone, particulate matter PM₁₀ and PM_{2.5}, nitrogen dioxide, carbon monoxide, lead, and sulfur dioxide—were identified based on a consensus of decades of research that concluded inhalation of each of these chemicals results in adverse health effects in humans. The six pollutants are identified below in **Table 1: Sources and Health Effects of Criteria Air Pollutants**, along with their common sources and primary health effects from inhalation exposure.

Table 1
Sources and Health Effects of Criteria Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O ₃)	Formed when VOCs and NO _x react in the presence of sunlight; VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, petroleum processing, and storage and pesticides	Breathing difficulties; lung tissue damage; damage to rubber and some plastics

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

Pollutants	Sources	Primary Effects
Respirable particulate matter (PM10)	Road dust, windblown dust (agriculture) and construction (fireplaces); also formed from other pollutants (e.g., acid rain, NO _x , oxides of sulfur [SO _x], organics) and from incomplete combustion of any fuel	Increases respiratory disease, lung damage, cancer, premature death; reduced visibility; surface soiling
Fine particulate matter (PM2.5)	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; also formed from reaction of other pollutants (e.g., acid rain, NO _x , SO _x , organics)	Increases respiratory disease, lung damage, cancer, premature death; reduced visibility; surface soiling
Carbon monoxide (CO)	Any source that burns fuel, such as automobiles, trucks, heavy construction equipment, farming equipment, and residential heating	Chest pain in heart patients; headaches; reduced mental alertness
Nitrogen dioxide (NO ₂)	See carbon monoxide.	Lung irritation and damage
Lead (Pb)	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint	Learning disabilities; brain and kidney damage
Sulfur dioxide (SO ₂)	Coal- or oil-burning power plants and industries, refineries, diesel engines	Increases lung disease and breathing problems for asthmatics; reacts in the atmosphere to form acid rain

Source: California Air Resources Board, "ARB Fact Sheet: Air Pollution and Health" (2009), <http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm> (accessed October 2019).

Ozone

Ozone (O₃) is a gas formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), both byproducts of internal combustion engine exhaust and other sources, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Volatile Organic Compounds

VOCs are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to form secondary air pollutants, including ozone. VOCs themselves are not criteria pollutants; however, they contribute to the formation of ozone and are regulated under State policies.

Respirable Particulate Matter

Respirable particulate matter (PM₁₀) consists of extremely small, suspended particles or droplets 10 micrometers (µm) or smaller in diameter. Some sources of PM₁₀, like pollen and windstorms, are naturally

occurring; however, in populated areas most PM₁₀ is caused by road dust, diesel soot, combustion products, the abrasion of tires and brakes, and construction activities.

Fine Particulate Matter

PM_{2.5} refers to fine particulate matter that is 2.5 µm or smaller in size. Sources of PM_{2.5} include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles, such as buses and trucks. These fine particles are also formed in the atmosphere when gases, such as sulfur dioxide (SO₂), NO_x, and VOCs are transformed in the air by chemical reactions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and because motor vehicles operating at slow speeds are the primary source of CO in the Basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO₂ is also a byproduct of fuel combustion. The principle form of NO₂ produced by combustion is NO, but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ referred to as NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_x is only potentially irritating. NO₂ absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.

Lead

Lead (Pb) occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so most such combustion emissions are associated with off-road vehicles, such as race cars, that use leaded gasoline. Other sources of Pb include the manufacturing and recycling of batteries; sanding or removal of lead-based paint; ink; ceramics; ammunition; and secondary lead smelters.

Sulfur Dioxide

SO₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high-sulfur-content fuel oils and coal, as well as from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄).

Federal

The USEPA sets national vehicle and stationary source emission standards; oversees approval of all SIPs; provides research and guidance for air pollution programs; and sets National Ambient Air Quality Standards (NAAQS). The NAAQS for the six CAPs are shown in **Table 2: Ambient Air Quality Standards** and were identified from provisions of the 1970 CAA. The sections of the CAA that are most applicable to the Project include *Title I: Nonattainment Provisions* and *Title II: Mobile Source Provisions*.

Table 2
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet photometry	—	Same as primary standard	Ultraviolet photometry
	8 hours	0.07 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable particulate matter (PM ₁₀)	24 hours	50 µg/m ³	Gravimetric or beta attenuation	150 µg/m ³	Same as primary standard	Inertial separation and gravimetric analysis
	Annual arithmetic mean	20 µg/m ³		—		
Fine particulate matter (PM _{2.5})	24 hours	No separate State standard	Gravimetric or beta attenuation	35 µg/m ³	Same as primary standard	Inertial separation and gravimetric analysis
	Annual arithmetic mean	12 µg/m ³		15 µg/m ³		
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Nondispersive infrared photometry (NDIR)	9 ppm (10 mg/m ³)	None	NDIR
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen dioxide (NO ₂)	Annual arithmetic mean	0.03 ppm (57 µg/m ³)	Gas phase chemiluminescence	0.053 ppm (100 µg/m ³)	Same as primary standard	Gas phase chemiluminescence
	1 hour	0.18 ppm (339 µg/m ³)		0.100 ppm (188 µg/m ³)		

Source: California Air Resources Board. "Air Quality Standards," accessed October 2019, <http://www.arb.ca.gov/research/aaqs/aaqs.htm>.

Note: ppm = parts per million.

The CAA and the promulgated standards have evolved as a living document over time as research into the effects of air pollution has enhanced regulatory understanding of the associated issues. The 1990

amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. On the national level, the USEPA designates regions as achieving “attainment” or suffering from “nonattainment” of the NAAQS based on air quality monitoring data. Regions that are designated as being in nonattainment are responsible for devising localized strategies for reducing emissions of CAPs and achieving regional attainment within a predetermined timeframe set by the USEPA.

The NAAQS were further amended in July 1997 to include an 8-hour standard for ozone and to adopt an NAAQS for PM_{2.5}. The NAAQS were amended again in September 2006 to include an established methodology for calculating PM_{2.5}, as well as to revoke the annual PM₁₀ threshold. Additional revisions to the AAQS may be implemented in the future as the science of air quality progresses.

State

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. CARB is responsible for the coordination and administration of both State and federal air pollution control programs within California. In this capacity, CARB conducts research, sets CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions and the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the State. The CAAQS are provided in **Table 2**; it should be noted that the CAAQS are generally more stringent than the NAAQS, reflecting California’s diligent efforts toward reducing air pollution and improving air quality.

Regional

In California, jurisdiction over air quality management, enforcement, and planning divided into 35 geographic regions. Within each region, a local air district is responsible for oversight of air quality monitoring, modeling, permitting, and enforcement to ensure that regulatory violations are avoided wherever possible.

The Project site is located within the 6,700-square-mile Basin and is under the jurisdiction of the SCAQMD. The Basin includes the southern two-thirds of Los Angeles County, all of Orange County, and the western urbanized portions of Riverside and San Bernardino Counties.

Air Quality Management Plan

CARB approved the 2016 AQMP on March 23, 2017.³ Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, State, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation, and other planning efforts. The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal nonattainment pollutants ozone and PM_{2.5}.⁴

South Coast Air Quality Management District

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

SCAQMD is responsible for controlling emissions, primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the air basins. SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is also responsible for developing, updating, and implementing the AQMP for the air basins. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as being in nonattainment of the NAAQS or CAAQS. The term “nonattainment area” is used to refer to an air basin in which one or more AAQS are exceeded. SCAQMD also prepares the SIP for its jurisdiction and promulgates rules and regulations. The SIP includes strategies and tactics to be used to attain the federal ozone standards in the Basin. The SIP elements are taken from the most recent AQMP.

SCAQMD approved a Final 2016 AQMP on March 3, 2017.⁵ The 2016 AQMP includes transportation control measures developed by SCAG from its *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016–2040 RTP/SCS), as well as the integrated strategies and measures needed to

3 South Coast Air Quality Management District (SCAQMD), *Final 2016 Air Quality Management Plan (March 2017)*, accessed October 2019, <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

4 SCAQMD, “NAAQS/CAAQS and Attainment Status for South Coast Air Basin” (2016), accessed October 2019, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>.

5 SCAQMD, “Final 2016 Air Quality Management Plan” (2016), accessed October 2019, <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

meet the NAAQS. The 2016 AQMP demonstrates attainment of the 1-hour and 8-hour ozone NAAQS, as well as the latest 24-hour and annual PM_{2.5} standards.

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

Among the SCAQMD rules applicable to the Project are Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 requires the use of stringent best available control measures (BACMs) to minimize PM₁₀ emissions during grading and construction activities. Rule 1113 limits the VOC content of coatings, with a VOC content limit for flat coatings of 50 grams per liter (g/L).⁶ Additional details regarding these rules and other potentially applicable rules are presented as follows.

Rule 401 (Visible Emissions): This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever an air contaminant for a period or periods aggregating more than three minutes in any hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.

Rule 402 (Nuisance): This rule states that 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 to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”*⁷

Rule 403 (Fugitive Dust). This rule requires fugitive dust sources to implement BACMs for all sources and prohibits all forms of visible particulate matter from crossing any property line. BACMs may include application of water or chemical stabilizers to disturbed soils covering haul vehicles; restricting vehicle speeds on unpaved roads to 15 miles per hour (mph); sweeping loose dirt from paved site-access roadways; cessation of construction activity when winds exceed 25 mph; and establishing a permanent ground cover on finished sites. SCAQMD Rule 403 is intended to reduce PM₁₀ emissions from any

6 SCAQMD, “Rule 1113 Architectural Coating” (amended September 6, 2013), accessed October 2019, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>.

7 SCAQMD, “Rule 402—Nuisance,” accessed October 2019, <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.

transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

Rule 1113 (Architectural Coatings). This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters). This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NOx emissions from natural-gas-fired water heaters, boilers, and process heaters as defined in this rule.

Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations). This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Stationary emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being generated and uses this information in developing AQMPs.

Greenhouse Gas

Greenhouse Gas Reduction Targets

In 2006, the California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. CARB is the State agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming as part of an effort to reduce emissions of GHGs.

The CARB Governing Board approved the 1990 GHG emissions level of 427 million metric tons of carbon dioxide equivalents (MMTCO₂e) on December 6, 2007. Therefore, by 2020, emissions in California are required to be at or below 427 MMTCO₂e. Under the current "business as usual" (BAU) scenario, Statewide emissions are increasing at a rate of approximately 1 percent per year as noted below.

- 1990: 427 MMTCO₂e
- 2004: 480 MMTCO₂e

- 2008: 495 MMTCO₂e
- 2020: 596 MMTCO₂e

Under AB 32, the CARB published its *Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California* (Early Action Measures Report).⁸ The CARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of those early action measures, nine are considered discrete early action measures because they were adopted by the CARB and enforceable by January 1, 2010.⁹ The CARB estimates that the 44 early action measures will result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

CEQA is only discussed once in the Early Action Measures report. The California Air Pollution Control Officer's Association (CAPCOA) suggested that CARB work with local air districts on approaches to review GHG impacts under the CEQA process, including significance thresholds for GHGs for projects, and to develop a process for capturing reductions that result from CEQA mitigations. CARB's response to this recommendation in the report is as follows:

*The Governor's Office of Planning and Research is charged with providing statewide guidance on CEQA implementation. With respect to quantifying any reductions that result from project-level mitigation of GHG emissions, we would like to see air districts take a lead role in tracking such reductions in their regions.*¹⁰

The CARB approved the Climate Change Proposed Scoping Plan (Scoping Plan) in December 2008. The Scoping Plan:

*proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.*¹¹

As noted in the approved 2008 Scoping Plan, the projected total BAU emissions for year 2020 (estimated as 506.8 MMTCO₂e) must be reduced by approximately 16 percent to achieve the CARB's approved 2020 emission target of 427 MMTCO₂e. CARB updated the 2008 Scoping Plan in May 2014 (Updated 2014

8 California Air Resources Board (CARB), *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*, accessed October 2019, http://www.arb.ca.gov/cc/cea/meetings/ea_final_report.pdf.

9 Discrete early actions are regulations to reduce GHG emissions adopted by the CARB Governing Board and enforceable by January 1, 2010.

10 CARB, *Expanded List of Early Action Measures*.

11 CARB, *Climate Change Scoping Plan: A Framework for Change* (December 2008), http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed October 2019.

Scoping Plan).¹² The Updated 2014 Scoping Plan adjusted the 1990 GHG emissions level to 431 MMTCO₂e, while the updated 2020 GHG emissions forecast is 509 MMTCO₂e, which took credit for certain GHG emission reduction measures already in place (e.g., the Renewable Portfolio Standard). As revised in 2014, the projected total BAU emissions for year 2020 must be reduced by approximately 15 percent to achieve the CARB's approved 2020 emission target of 431 MMTCO₂e. The Updated 2014 Scoping Plan also recommend a 40 percent reduction in GHG emissions from 1990 levels by 2030 and a 60 percent reduction in GHG emissions from 1990 levels by 2040. In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. ARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set out in Executive Order (EO) B-30-15 and codified by SB 32.

The 2008 Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the 2008 Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the LCFS; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program.¹³ The 2008 Scoping Plan states that the

¹² CARB, First Update to the Climate Change Scoping Plan (May 2014).

¹³ The cap-and-trade program is a central element of AB 32 and covers major sources of GHG emissions in the state, such as refineries, power plants, industrial facilities, and transportation fuels. The regulation includes an enforceable GHG cap that will decline over time. CARB will distribute allowances, which are tradeable permits, equal to the emission allowed under the cap.

inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. “Uncapped” strategies include additional reductions that will not be subject to the cap-and-trade emissions requirements. They are provided as a margin of safety to help achieve required GHG emission reductions.

Transportation

In response to the transportation sector accounting for a large percentage of California’s CO₂ emissions, AB 1493 (HSC Section 42823 and 43018.5), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. The federal Clean Air Act ordinarily preempts State regulation of motor vehicle emission standards; however, California is allowed to set its own standards with a federal Clean Air Act waiver from the USEPA. In June 2009, the USEPA granted California the waiver.

The USEPA and United States Department of Transportation (USDOT) adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California—and states adopting the California emissions standards (referred to as the Pavley standards)—agreed to defer to the national standard through model year 2016. The State standards require additional reductions in CO₂ emissions beyond model year 2016 (referred to as the Pavley Phase II standards). The USEPA and USDOT also adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater reductions nationally and is stringent enough to meet State GHG emission reduction goals. In 2012, CARB adopted regulations that allow manufacturers to comply with the 2017-2025 national standards to meet State law.

Executive Order S-01-07 mandates the following: (1) establish a Statewide goal to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard (LCFS) for transportation fuels in California. CARB identified the LCFS as one of the nine discrete early actions in the Climate Change Scoping Plan. The LCFS regulations were approved by CARB in 2009 and established a reduction in the carbon intensity of transportation fuels by 10 percent by 2020 with implementation beginning on January 1, 2011. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.

As discussed previously, SCAG is required to adopt an SCS pursuant to SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. The 2016–2040 RTP/SCS demonstrates a reduction in per capita transportation GHG emissions by eight percent by 2020; 18 percent by 2035; and 21 percent by 2040.

Energy

The California Energy Commission (CEC) first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.” The CALGreen Code is mandatory for all new buildings constructed in the State and establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017.

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the Renewables Portfolio Standard with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's Renewables Portfolio Standard to 33 percent by 2020. SB 350 (Chapter 547, Statutes of 2015), signed into law on October 7, 2015, further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027.

ENVIRONMENTAL SETTING

Air Quality

The USEPA is the federal agency responsible for overseeing the country's air quality and setting the NAAQS for the CAPs. The NAAQS were devised based on extensive modeling and monitoring of air pollution across the country; they are designed to protect public health and prevent the formation of atmospheric ozone. Air quality of a region is considered to be in attainment of the NAAQS if the measured ambient air pollutant levels do not exceed the applicable concentration threshold. **Table 2** above presents the federal and State AAQS.

As noted previously, the CARB is the State agency responsible for setting the CAAQS. Air quality of a region is considered to be in attainment of the CAAQS if the measured ambient air pollutant levels for ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and PB are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period. The CAAQS are also presented in **Table 2**.

For evaluation purposes, the SCAQMD territory is divided into 38 source receptor areas (SRAs). These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The Project site is within SRA 16, North Orange County.¹⁴ The nearest air monitoring station SCAQMD operates is the Anaheim–Pampas station located at 1630 Pampas Lane, Anaheim CA.¹⁵ This station monitors O₃ (1-hour, 8-hour), NO₂, PM₁₀ and PM_{2.5}. **Table 3: Air Quality Monitoring Summary** summarizes published monitoring data from 2016 through 2018, the most recent 3-year period available. The data shows that during the past few years, the region has exceeded the O₃ and PM_{2.5} standards.

The USEPA and the CARB designate air basins where AAQS are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The current attainment designations for the Basin are shown in **Table 4: South Coast Air Basin Attainment Status**. The Basin is currently designated as being in nonattainment at the federal level for ozone and PM_{2.5}; and at the State level for ozone, PM₁₀, and PM_{2.5}.

14 SCAQMD, General Forecast Areas and Air Monitoring Areas, map, accessed October 2019, <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

15 SCAQMD, Quality Assurance Air Monitoring Site Information, accessed October 2019, https://ww3.arb.ca.gov/qaweb/site.php?s_arb_code=30178.

Table 3
Air Quality Monitoring Summary

Air Pollutant	Average Time (Units)	2016	2017	2018
Ozone (O3)	State Max 1 hour (ppm)	0.103	0.090	0.112
	Days > CAAQS threshold (0.09 ppm)	2	0	1
	National Max 8 hour (ppm)	0.074	0.076	0.071
	Days > NAAQS threshold (0.075 ppm)	4	4	1
Carbon monoxide (CO)	State Max 1 hour (ppm)	N/A	N/A	N/A
	Days > CAAQS threshold (9 ppm)	N/A	N/A	N/A
	State Max 8 hour (20 ppm)	N/A	N/A	N/A
Nitrogen dioxide (NO2)	National Max 1 hour (ppm)	0.064	0.081	0.066
	Days > NAAQS threshold (0.100 ppm)	0	0	0
	State Max 1 hour (ppm)	0.064	0.081	0.066
Respirable particulate matter (PM10)	State Max (µg/m ³)	74.0	95.7	94.6
	State Annual Average (µg/m ³)	28.0	26.9	27.7
	Days > CAAQS threshold (50 µg/m ³)	0	0	0
Fine particulate matter (PM2.5)	State Max (µg/m ³)	44.4	53.9	63.
	State Annual Average (µg/m ³)	9.4	N/A	12.3
	Days > NAAQS threshold (35 µg/m ³)	1	7	7

Source: Bay Area Air Quality Management District, "Annual Bay Area Air Quality Summaries,"
<https://www.arb.ca.gov/adam/topfour/topfourdisplay.php>.

Notes: > = exceed; CAAQS = California Ambient Air Quality Standard; max = maximum; mean = annual arithmetic mean;
 µg/m³ = micrograms per cubic meter; ND = no data; NAAQS = National Ambient Air Quality Standard; ppm = parts per million.
 N/A = Data not available.

Table 4
South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone (O3)	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen dioxide (NO2)	Attainment	Unclassified/Attainment
Sulfur dioxide (SO2)	Attainment	Attainment
Respirable particulate matter (PM10)	Nonattainment	Attainment
Fine particulate matter (PM2.5)	Nonattainment	Nonattainment

Source: California Air Resources Board (CARB) Area Designation Maps / State and National,
<http://www.arb.ca.gov/desig/adm/adm.htm>, last reviewed May 5, 2016.

Greenhouse Gases

In 2017, California produced 424.1 MMTCO₂e, including imported electricity and excluding combustion of international fuels and carbon sinks or storage. The largest source of GHGs in California is transportation, contributing to 40 percent of the State's total GHG emissions. Industrial generation is the second largest source, contributing to 21 percent of the State's GHG emissions. The Statewide inventory of GHGs by sector is shown in **Table 5: California GHG Inventory 2009-2017**.

Table 5
California GHG Inventory 2009-2017

Main Sector	Emissions (MMTCO ₂ e)								
	2009	2010	2011	2012	2013	2014	2015	2016	2017
Transportation ^a	170.20	165.13	161.76	161.31	160.91	162.53	166.18	168.76	169.86
Industrial ^b	87.90	91.50	90.17	91.08	93.69	94.02	91.48	89.49	89.40
Electric Power	101.37	90.34	87.97	95.52	89.40	88.46	83.82	68.59	62.39
Commercial and Residential	44.48	45.92	46.37	43.76	44.42	38.25	38.82	40.62	41.14
Agriculture	32.85	33.68	34.34	35.46	33.99	35.06	33.75	33.51	32.42
High GWP ^{c,d}	12.29	13.52	14.53	15.54	16.75	17.73	18.60	19.26	19.99
Recycled and Waste	8.27	8.37	8.47	8.49	8.52	8.59	8.73	8.81	8.89
Total Emissions	457.35	448.46	443.61	451.16	447.69	444.65	444.37	429.04	424.10

Source: CARB (2017), https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-17.pdf.

Note: MMTCO₂e = million metric tons of carbon dioxide equivalents.

^a Includes equipment used in construction, mining, oil drilling, industrial and airport ground operations.

^b Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions.

^c These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.

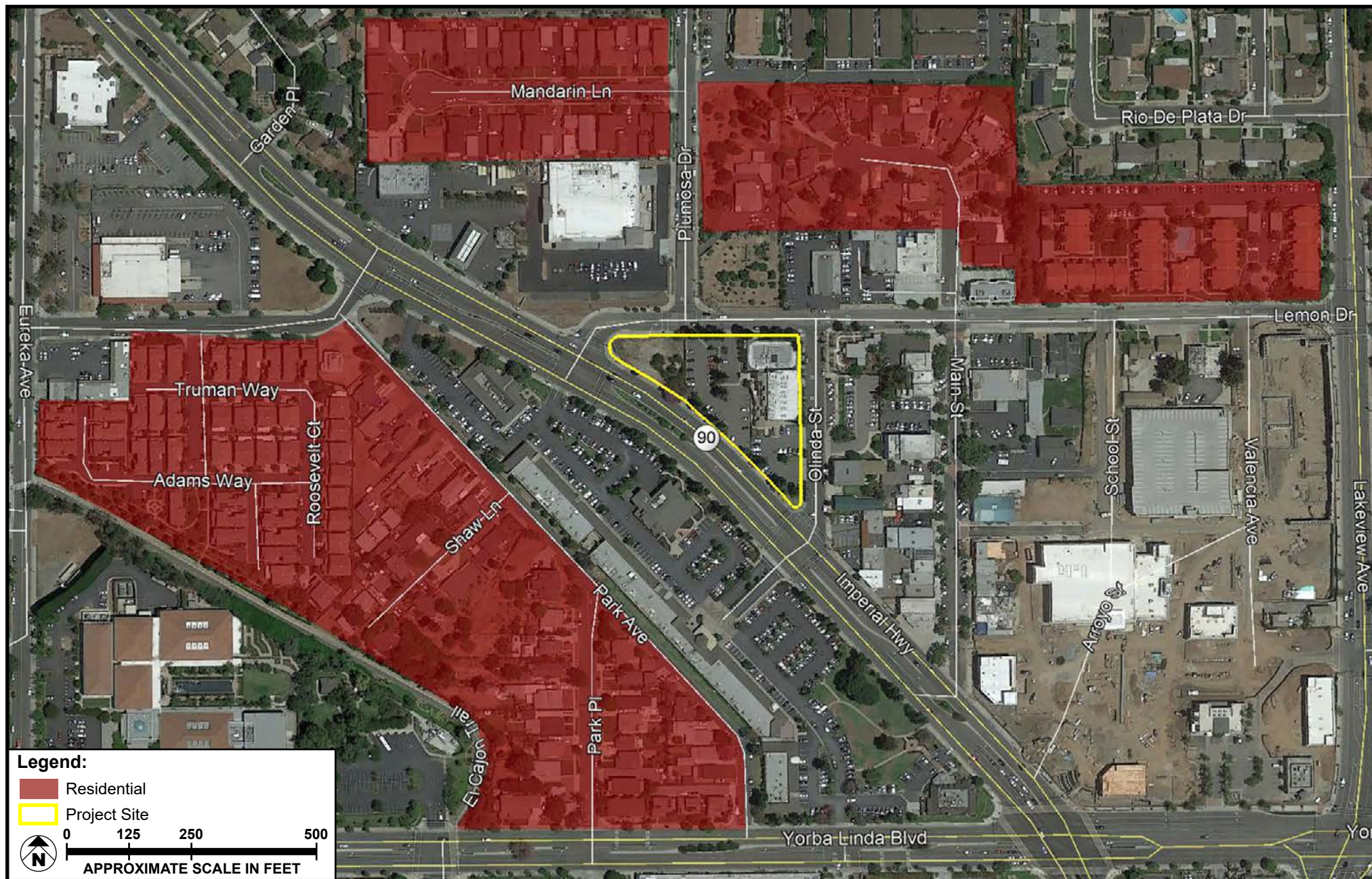
^d This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.

EXISTING OPERATIONAL EMISSIONS

Sensitive Receptors

The SCAQMD considers a sensitive receptor to be a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Sensitive receptors are identified near sources of air pollution to determine the potential for health hazards. Locations evaluated for exposure to air pollution include but are not limited to residences, schools, hospitals, and convalescent facilities.

Residential neighborhoods lie directly to the north along Plumosa Drive, to the south along Park Avenue, and to the east along Lemon Drive. **Figure 2: Sensitive Receptor Map** provides a detailed image of the proximal land uses and identifies the sensitive receptors closest to the Project site. These uses represent the nearest sensitive receptors who may be impacted by emissions of air pollutants from Project implementation.



SOURCE: Google Earth - 2019

FIGURE 2

Air Quality

As mentioned previously, the existing structures and parking lots on the remaining two parcels are currently owned by the City of Yorba Linda and will be demolished prior to, and without respect to the approval of, the commencement of this project as part of the approved Yorba Linda Town Center project, which was analyzed within the Yorba Linda Town Center Addendum to the Certified EIR for the Yorba Linda Town Center Project Library and Arts Center. However, for informational purposes only **Table 6: Existing Air Quality Emissions** identifies the existing emissions from those uses. The most current CARB-approved, SCAQMD-recommended air quality modeling software the California Emissions Estimator Model (CalEEMod version 2016.3.2) was used to estimate air quality operational emissions.

Table 6
Existing Air Quality Emissions

Source	VOC	NOx	CO	SOx	PM10	PM2.5
pounds/day						
Maximum	2	8	23	<1	6	2

Source: Refer to the data sheets in **Appendix A1: Existing Summer** and **Appendix A2: Existing Winter**.

Note: Totals may not add up exactly due to rounding in the modeling calculations.

Greenhouse Gases

The existing site GHG emissions are provided in **Table 7: Existing Greenhouse Gas Emissions**. Similar to the air quality emissions provided above, the emissions were estimated using CalEEMod.

Table 7
Existing Greenhouse Gas Emissions

GHG Emissions Source	Project Emissions (MTCO ₂ e/year)
Area	<1
Energy	57
Mobile	980
Waste	7
Water	5
Annual Total	1,049

Notes: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

MTCO₂e = metric tons of carbon dioxide emissions.

Refer to **Appendix B1: Existing Annual**, Section 2.2 for maximum annual operation emissions.

METHODOLOGY

Construction

Construction of the Project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment and through vehicle trips generated from workers and haul trucks traveling to and from the Project site. In addition, fugitive dust emissions would result from various soil-handling activities. Mobile-source emissions, primarily NO_x, would result from the use of construction equipment, such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The project would be required comply with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located with the SCAB. Therefore, the following condition, which would be required to reduce fugitive dust in compliance with SCAQMD Rule 403, were included in CalEEMod as a mitigation measure:

- **Control Efficiency of PM₁₀.** During construction, methods and techniques should be applied to various operations or equipment when appropriate to reduce estimated emissions related to particulate matter. This includes replacing ground cover in disturbed areas as quick as possible, yielding to emission reduction efficiency of 15 – 49 percent.¹⁶

In addition, SCAQMD Staff recommends that the Lead Agency require the use of Tier 4 construction equipment of 50 horsepower or greater during construction. Alternative, applicable strategies. Such equipment should be outfitted with Best Available Control Technology (BACT) devices, but not limited to, a CARB certified Level 3 Diesel Particulate Filters (DPF). Level 3 DPFs are capable of achieving at least an 85 percent reduction in particulate matter emissions.¹⁷ Therefore, the following condition were included in CalEEMod as a mitigation measure:

- **Construction Equipment Controls.** During construction, all off-road construction equipment greater than 50 horsepower shall meet U.S. EPA Tier 3 emission standards with Level 3 DPF to minimize emissions of NO_x associated with diesel construction equipment.

¹⁶ SCAQMD, CEQA Handbook, Tables 11-4, p. 11-15 and A11-9-A, page A11-77, accessed June 2019, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-sample-construction-scenario-report.pdf>.

¹⁷ California Air Resources Board. *Diesel Off-Road Equipment Measure – Workshop*. Page 17, November 16 – 17, 2004, accessed October 2019, https://ww3.arb.ca.gov/msprog/ordiesel/presentations/nov16-04_workshop.pdf.

The emissions are estimated using the CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from the CARB off-road emissions model (OFFROAD) and the CARB on-road vehicle emissions model (EMFAC), which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. The input values used in this analysis are based on conservative assumptions in CalEEMod, with appropriate, Project-specific adjustments based on equipment types and expected construction activities. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in **Appendix A**.

Operation

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the Project site. In addition, emissions would result from area sources on site, such as natural gas combustion, landscaping equipment, and use of consumer products.

Operational emissions were estimated using the CalEEMod software, which was used to forecast the daily regional emissions from area sources that would occur during long-term Project operations. In calculating mobile-source emissions, the trip length values were based on the distances provided in CalEEMod. For a worst case scenario analysis, the weekday PM peak hour trips (283) and weekend peak hour trips (258) forecasted in the Traffic Impact Analysis¹⁸ was assumed to take place within every hour of daily operations.¹⁹ The daily trips was divided by the quantity of the proposed land use to identify the weekday and weekend daily trip rates.

Area-source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product usage (including paints) rates provided in CalEEMod. Natural gas usage factors in CalEEMod are based on the California Energy Commission (CEC) California Commercial End Use Survey (CEUS) data set, which provides energy demand by building type and climate zone. Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the Project.

Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. Therefore, the analysis is based on the Project's net operational emissions by subtracting the existing site emissions from the Project emissions. The maximum daily net emissions from operation of the Project are compared to the SCAQMD daily regional numeric indicators.

¹⁸ Ganddini Group Inc, *18181 Imperial Highway In-N-Out Traffic Impact Analysis*, March 18 2020.

¹⁹ 283 weekday PM peak hour trips x 14 hours/day = 3,962 trips; 258 weekend peak hour trips x 14 hours/day = 3,612 trips

Greenhouse Gases

GHG Emissions

The total GHG emissions from the Project were quantified to determine the level of the Project's estimated annual GHG emissions. As with the Air Quality section calculations, construction emissions were estimated using CalEEMod by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile-source emissions factors. The modeling used the same input values as previously discussed under the methodology section for air quality. SCAQMD's *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold*²⁰ recognizes that construction-related GHG emissions from projects occur over a relatively short-term period of time and contributes a relatively small portion of a project's overall lifetime GHG emissions. The guidance recommends that a project's construction-related GHG emissions be amortized over a 30-year project lifetime so that GHG reduction measures will address construction GHG emissions as part of the operation GHG reduction strategies.

CalEEMod was also used to estimate operational GHG emissions from electricity, natural gas, solid waste, water and wastewater, fireplaces, and landscaping equipment. Building electricity and natural gas usage rates were adjusted to account for current Title 24 Building Energy Efficiency Standards. Mobile-source emissions were estimated based on the CARB EMFAC model. For mobile sources, CalEEMod was used to generate the vehicle miles traveled from the existing and Project uses based on the Project traffic impact analysis (TIA) prepared by Ganddini Group for the Project.²¹

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on square footage as well as predicted water supply needs for this use. Energy demand (off-site electricity generation and on-site natural gas consumption) for the Project was calculated within CalEEMod using the CEC's CEUS data set, which provides energy demand by building type and climate zone. However, given that the data from the CEUS is from 2002, correction factors are incorporated into CalEEMod to account for the current version of the Title 24 Building Energy Efficiency Standards.

Emissions of GHGs from solid waste disposal were also calculated using CalEEMod software. The emissions are based on the waste disposal rate for the land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for methane, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are Statewide averages, were used in this assessment.

20 SCAQMD, *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (October 2008).

21 Ganddini Group, *18181 Imperial Highway In-N-Out Traffic Impact Analysis*, March 18, 2020

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions are calculated using CalEEMod and are based on the water usage rate for the restaurant use; the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment; the GHG emission factors for the electricity utility provider; and the emission factors for the wastewater treatment process.

With respect to emission rates, CalEEMod incorporates EMFAC2014 emission rates by vehicle class and vehicle process. Specific CO₂ emissions, EMFAC and subsequently CalEEMod take into account the following emission processes related to CO₂ on an annual basis:

- **Start Exhaust:** Extra emissions that occur when starting a vehicle.
- **Idle Exhaust:** Emissions occur during extended idling events or when the vehicle is not operating any significant distance.
- **Run Exhaust:** Emissions occur when traveling on the road, including at speed and idling as part of normal driving.

Emission rates are defined in terms of gram per vehicle mile for Run Exhaust, gram per vehicle idle hour for Idle Exhaust, and gram per vehicle start for Start Exhaust. CalEEMod includes the EMFAC emission rates for annual CO₂ for Run Exhaust and Start Exhaust for light duty automobiles and trucks, but not for Idle Exhaust. It would be speculative to determine the number of vehicle starts while idling through the drive through or the length of time idling. As indicated in the CalEEMod output files, the Run Exhaust emission rate is substantially higher for each vehicle class than the Start Exhaust or Idle Exhaust for larger vehicles. As such, for purposes of this analysis, the Run Exhaust emission rate is utilized to provide additional clarification regarding the Project's GHG emissions while idling at the Project site.

Consistency with Greenhouse Gas Plans, Policies, and Regulations

The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan as recommended in the relevant amendments to the CEQA Guidelines. However, the City has adopted the Green Building Code, which encourages and requires applicable projects to implement energy efficiency measures. Thus, if the Project were designed in accordance with these policies and regulations, it would result in a less than significant impact because it would be consistent with the overarching State regulations on GHG reduction.

SIGNIFICANCE THRESHOLDS

The thresholds for determining the significance impacts are set forth by the SCAQMD for both construction and operational emissions. These thresholds are described below.

Construction Emission Thresholds

The Project will have a significant impact if it exceeds the construction thresholds listed in **Table 8: Construction Thresholds**.

Table 8
Construction Thresholds

Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)
Volatile Organic Compounds (VOCs)	75
Nitrogen dioxide (NO ₂)	100
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150
Fine particulate matter (PM _{2.5})	55

Source: SCAQMD Air Quality Significance Thresholds

Operation Emission Thresholds

The Project will have a significant impact if it exceeds the operational thresholds listed in **Table 9: Operational Thresholds**.

Table 9
Operational Thresholds

Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)
Volatile Organic Compounds (VOCs)	55
Nitrogen dioxide (NO ₂)	55
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150
Fine particulate matter (PM _{2.5})	150

Source: SCAQMD Air Quality Significance Thresholds.

Localized Significance Thresholds

The local significance thresholds are based on the SCAQMD's Final *Localized Significance Threshold (LST) Methodology* (LST Methodology)²² guidance document for short-duration construction activities. The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project site because of construction activities. The SCAQMD provides voluntary guidance on the evaluation of localized air quality impacts to public agencies conducting environmental review of projects located within its jurisdiction. Localized air quality impacts are evaluated by examining the on-site generation of pollutants and their resulting downwind concentrations. For construction, pollutant concentrations are compared to significance thresholds for particulates (PM10 and PM2.5), CO, and NO2. The significance threshold for PM10 represents compliance with SCAQMD Rule 403 (Fugitive Dust). The threshold for PM2.5 is designed to limit emissions and to allow progress toward attainment of the AAQS. Thresholds for CO and NO2 represent the allowable increase in concentrations above background levels that would not cause or contribute to an exceedance of their respective AAQS.

The LST Methodology provides lookup tables of emissions that are based on construction projects of up to 5 acres in size. These LST lookup tables were developed to provide lead agencies with a simple tool for evaluating the impacts from small typical projects. Ambient conditions for the North Orange County area, as recorded in SRA 16 by the SCAQMD, were used for ambient conditions in determining appropriate threshold levels. Thresholds for each criteria pollutant for construction activity and Project operation of the 1.43-acre Project site are listed in **Table 10: Localized Significance Thresholds**.

Table 10
Localized Significance Thresholds

Pollutant	Construction pounds/day	Operational
Nitrogen dioxide (NO2)	122	122
Carbon monoxide (CO)	626	626
Respirable particulate matter (PM10)	5	1.4
Fine particulate matter (PM2.5)	3.4	1

Note: Based on a distance to sensitive receptors of 25 meters (82 feet). SCAQMD's Localized Significance Threshold (LST) Methodology for CEQA Evaluations guidance document provides that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

22 SCAQMD, *Final Localized Significance Threshold Methodology* (June 2003, rev. July 2008), accessed October 2019, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>.

Carbon Monoxide Hotspot

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to expose receptors to emissions that violate State and/or federal CO standard even if the broader air basin is in attainment for federal and State levels. The potential for violation of State and federal CO standards at area intersections and exposure to sensitive receptors at those intersections is addressed using the methodology outlined in the SCAQMD CEQA Guidelines and shown in **Table 11: CO Hotspot Threshold**.

Table 11
CO Hotspot Threshold

Pollutant	8-hour Average	1-hour Average
Local CO	9.0 ppm	20.0 ppm

Source: SCAQMD AQMD Air Quality Significance Thresholds, accessed October 2019,
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

Greenhouse Gases

The City of Yorba Linda has not yet adopted a numerical significance threshold for assessing impacts related to GHG emissions. When no guidance exists under CEQA, the lead agency may look to and assess general compliance with comparable regulatory schemes.

Given the lack of a formally adopted numerical significance threshold or a formally adopted local plan for reducing GHG emission applicable to this Project, the significance of the Project is evaluated consistent with CEQA, CAPCOA, and Office of Planning and Research guidelines and advisories. The significance of the Project will be based on an assessment of the Project's GHG emissions sources for general compliance with comparable regulatory schemes. "Tier 3," the primary tier by which SCAQMD currently determines the significance of stationary emission sources, relies on Executive Order S-3-05 as the basis for a screening level, and was established at a level that captures 90 percent of Basin-wide land-use GHG emissions.²³ The SCAQMD proposed a screening level of 3,000 metric tons of carbon dioxide equivalents (MTCO₂e) per year, under which project impacts are considered less than significant, for commercial or mixed-use residential projects to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors.

23 SCAQMD, *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, (October 2008), accessed October 2019, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf).

IMPACT ANALYSIS

Air Quality

Applicable Air Quality Plan

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan are based. The Project would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

The AQMP is designed to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP. This would not result in a substantial change in long-term operational population or employment growth that exceeds planned growth projections.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment and operation, the Project would not conflict with or obstruct implementation of the AQMP.

Violation of Ambient Air Quality Standards

Construction

Information needed to parameterize the Project in CalEEMod was obtained from the Applicant. Construction is anticipated to begin early 2021 and is expected to be completed within the same year, when the Project will become operational.

Table 12: Project Construction Schedule, provides the dates and durations of each of the activities that will take place during construction as well as a brief description of the scope of work. It is important to note, the demolition analysis of the Yorba Linda Public Library and the associated parking lots is for informational purposes only. These dates represent approximations based on the general Project timeline and are subject to change pending unpredictable circumstances that may arise.

Table 12
Project Construction Schedule

Construction Activity	Start Date	End Date	Duration (Days)	Description
Demolition	1/2/2021	1/29/2021	20	Removal of existing uses
Building Construction	1/30/2021	11/5/2021	200	Construction of foundations and structures In-N-Out building structure
Paving	11/5/2021	11/18/2021	10	Paving of asphalt surfaces.
Architectural Coating ^a	11/5/2021	11/18/2021	10	Application of architectural coatings to building materials

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which in turn generates air pollutant emissions. Site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition. Air pollutant emissions from construction activities on site would vary daily as construction activity levels change. To determine potential construction-related air quality impacts, criteria air pollutants generated by Project-related construction activities were compared to the SCAQMD significance thresholds, as identified above.

As shown in **Table 13: Unmitigated Maximum Construction Emissions**, criteria air pollutant unmitigated emissions from construction equipment would not exceed the SCAQMD average daily thresholds. It is important to note, the emissions analysis provided in **Table 13** takes into account the removal of the existing Yorba Linda Public Library and associated haul trips of building and material debris. Accordingly, construction-related criteria pollutant emissions would be less than significant.

Table 13
Unmitigated Maximum Construction Emissions

Source	VOC	NOx	CO	SOx	PM10	PM2.5
	pounds/day					
Unmitigated Maximum	4	21	15	<1	2	1
SCAQMD Mass Daily Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Sources: CalEEMod Version 2016.3.2.

Refer to **Appendix A3: Proposed Summer** and **Appendix A4: Proposed Winter**, Section 3.2 through 3.7, for maximum on-site plus off-site emissions during both the summer and winter seasons.

Although the Project would result in less than significant impacts for construction as shown in **Table 13**, the SCAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed the applicable Thresholds of Significance. These practices are listed below as Regulatory Compliance Measure (RCM) AQ-1.

- RCM AQ-1** During any construction period that causes ground disturbance, the Applicant shall ensure the Project contractor implements measures to control dust and exhaust. The contractor shall implement the following best management practices that are required of all projects:
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
 - All haul trucks transporting soil, sand, or other loose material off site shall be covered.
 - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
 - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
 - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Operation

Long-term criteria air pollutant emissions would result from the operation of the Project. Emissions generated during operation of this Project would involve the use of on-road mobile vehicles, electricity, natural gas, water, landscape equipment, and generation of solid waste and wastewater. The primary source of long-term criteria air pollutant emissions would be from Project-generated vehicle trips.

Table 14: Unmitigated Maximum Operational Emissions identifies the increase in criteria air pollutant emissions associated with the Project. As shown in **Table 14**, emissions would not exceed SCAQMD regional operational thresholds. Accordingly, regional operational emission impacts would be less than significant.

Table 14
Unmitigated Maximum Operational Emissions

Source	VOC	NOx	CO	SOx	PM10	PM2.5
	pounds/day					
Area	<1	0	<1	<1	0	0
Energy	<1	<1	<1	<1	<1	<1
Mobile	4	14	33	<1	9	2
Total	4	14	34	<1	9	2
SCAQMD Threshold	55	55	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No

Sources: CalEEMod Version 2016.3.2.

Notes: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

Refer to **Appendix A3: Proposed Summer** and **Appendix A4: Proposed Winter**, Section 2.2, for maximum operational emissions during both the summer and winter seasons.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Localized Emissions

The result of the LST analysis are provided in **Table 15: Localized Construction and Operational Emissions**. Construction estimates assume the maximum area that would be disturbed during construction on any

given day during Project buildout. Construction would be required to comply with the SCAQMD's Rule 403 (Fugitive Dust), which requires watering of the site during dust-generating construction activities, stabilizing disturbed areas with water or chemical stabilizers, and preventing track-out dust from construction vehicles. As shown in **Table 15**, emissions would not exceed the localized significance construction and operational thresholds.

Table 15
Localized Construction and Operational Emissions

Source	NOx	CO	PM10	PM2.5
On-Site Emissions (pounds/day)				
Construction				
Total maximum emissions	20	14	2	1
LST Threshold	122	626	5	3.4
Threshold Exceeded?	No	No	No	No
Operational				
Project area/energy emissions	<1	<1	<1	<1
LST Threshold	122	626	1.4	1
Threshold Exceeded?	No	No	No	No

Notes:

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

The net/area energy emissions of the Project represent the net difference between the existing operational uses that would be removed and the Project operational emissions.

*Refer to **Appendix A3: Proposed Summer** and **Appendix A4: Proposed Winter**, Section 3.2 through 3.7, for maximum on-site emissions during both the summer and winter seasons.*

Toxic Air Contaminants

Project construction would result in short-term emissions in diesel particulate matter, which is a toxic air contaminant (TAC). Off-road heavy-duty diesel equipment would emit diesel particulate matter over the course of the construction period. Sensitive receptors are located adjacent to the north and to the east. Localized diesel particulate matter emissions (strongly correlated with PM2.5 emissions) would be minimal and would be substantially below localized thresholds as presented in **Table 15**. The Project would comply with the CARB's anti-idling airborne toxic control measure (ATCM), which limits idling to no more than 5 minutes at any location for diesel-fueled commercial vehicles. Compliance with this ATCM would further minimize diesel particulate matter emissions in the Project area. The Project would also utilize a

construction contractor(s) that complies with required and applicable BACMs and the In-Use Off-Road Diesel Vehicle Regulation.²⁴

Project operations would generate only minor amounts of diesel emissions from delivery and incidental maintenance activities. Trucks would comply with the applicable provisions of the CARB Truck and Bus Regulation²⁵ to minimize and reduce emissions from existing diesel trucks. Therefore, Project operations would not be considered a substantial source of diesel particulates. In addition, Project operations would result in only minimum emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings and other cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed In-N-Out restaurant. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be minimal and would not be expected to exceed the SCAQMD thresholds of significance.

Carbon Monoxide (CO) Hotspot

No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time, and the Air Basin is currently designated as a CO attainment area for both CAAQS and NAAQS. Thus, it is not reasonable to expect that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

The Air Basin is designated as attainment under both the national and California in AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited in order to generate a significant CO impact. The proposed Project would generate 212 and 232 weekday PM and Saturday mid-day peak hour trips. Therefore, the Project would not have a potential to substantially increase CO hotspots at intersections in the vicinity of the site.

Objectionable Dust or Odors

As shown in **Table 15**, construction of the Project would result in emissions below the LSTs. Mandatory compliance with SCAQMD Rule 1113 (Architectural Coating) would limit the amount of VOCs in architectural coatings and solvents. According to the SCAQMD, while almost any source may emit objectionable odors, some land uses are more likely to produce odors because of their operation. Land uses more likely to produce odors include agriculture, chemical plants, composting operations, dairies,

24 CARB, *Regulation For In-Use Off-Road Diesel-Fueled Fleets*, accessed October 2019, <https://www.arb.ca.gov/regact/2010/offroadlsi10/finaloffroadreg.pdf>.

25 CARB, *Title 13, California Code of Regulations Division 3: Air Resources Board Chapter 1: Motor Vehicle Pollution Control Devices*. <https://www.arb.ca.gov/msprog/onrdiesel/documents/tbfinalreg.pdf>, accessed October 2019

fiberglass molding manufacturing, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants. The Project does not contain any active manufacturing activities and would not convert current agricultural land to residential land uses. Therefore, objectionable odors would not be emitted by the residential uses.

Any unforeseen odors generated by the Project will be controlled in accordance with SCAQMD Rule 402 (Nuisance). As previously noted, Rule 402 prohibits the discharge of air contaminants that harm, endanger, or annoy individuals or the public; endanger the comfort, health or safety of individuals or the public; or cause injury or damage to business or property. Failure to comply with Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan.

Cumulative

Development of the Project in conjunction with the related projects near the Project would result in an increase in construction and operational emissions in an already urbanized area. However, cumulative air quality impacts from construction, based on SCAQMD guidelines, are not analyzed in a manner similar to project-specific air quality impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts. Individual development projects that generate construction or operational emissions that exceed the SCAQMD screening thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. As shown in **Table 13** through **Table 15**, the proposed Project would not exceed the established project or cumulative impact thresholds.

Greenhouse Gas Emissions

Direct or Indirect GHG Emissions

CalEEMod, developed by CAPCOA, was used to quantify atmospheric emissions of GHG emissions, based on information for similarly sized sites, with respect to the construction schedule, equipment inventory, energy use, and traffic from the Project. The primary source of GHG emissions from the Project during construction would be from mobile sources, including off-road equipment, construction equipment and trucks, and worker vehicles.

The GHG results of Project construction are presented in **Table 16: Project Construction-Related Greenhouse Gas Emissions**. As shown in **Table 16**, the total GHG emissions from construction activities would be approximately 181 metric tons of carbon dioxide equivalents (MTCO₂e). One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building.

For buildings in general, it is reasonable to look at a 30-year time frame because this is a typical interval before a new building requires its first major renovation.²⁶ As shown in **Table 16**, when amortized over an average 30-year Project lifetime, average annual construction emissions from the Project would represent a nominal source of GHG emissions of 6 MTCO₂e per year.

To calculate the idling emissions using the Run Exhaust emission rate, it was conservatively assumed that all 3,012 daily vehicle trips would occur at the drive-through 365 days out of the year. The drive through trip length is estimated at 0.14 miles in length.²⁷ Accordingly, the Project would generate approximately 197,888 VMT per year at the drive through.²⁸

The average EMFAC Run Exhaust emission factor of the vehicles to likely access the site is multiplied with the VMT at the drive through and converted to metric tons of carbon dioxide equivalent resulting in an additional 100 MTCO₂e/year of GHG emissions while idling.

In addition, the GHG emissions resulting from operation of the Project, which involves the usage of on-road mobile vehicles daily trips, electricity, natural gas, water, landscape equipment, and generation of solid waste and wastewater are shown in **Table 17: Project Operational Greenhouse Gas Emissions**. As shown in **Table 17**, the total increase in GHG emissions generated at the Project site would be approximately 1,915 MTCO₂e per year. Operation of the Project would not exceed SCAQMD's screening threshold of 3,000 MTCO₂e.

Table 16
Project Construction-Related Greenhouse Gas Emissions

Year	Project Emissions (MTCO ₂ e/year) ^a
2021	181
Amortized (30-year)	6

Source: California Emissions Estimator Model (CalEEMod) (2016).

Refer to **Appendix B2: Proposed Annual**, Section 2.1, for construction emissions.

²⁶ International Energy Agency (IEA), Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings, IEA Information Paper (2008).

²⁷ Distance includes entry/exit to/from Lemon Drive

²⁸ 3,962 daily trips x 0.14 miles in length x 365 days per year = 202,458 vehicle miles travelled.

Table 17
Project Operational Greenhouse Gas Emissions

GHG Emissions Source	Project Emissions (MTCO₂e/year)
Construction (amortized)	6
Area	<1
Energy	99
Mobile (daily trips)	1,681
Mobile (idling)	100
Waste	22
Water	7
Annual Total	1,915
SCAQMD Threshold	3,000
Exceeds Threshold?	No

Notes: Totals in table may not appear to add exactly due to rounding in the computer model calculations. MTCO₂e = metric tons of carbon dioxide emissions.

*Refer to **Appendix B2: Proposed Annual**, Section 2.2, for maximum annual operation emissions.*

Conflict with Applicable Greenhouse Gas Reduction Plans, Policies, or Regulations

The Project is committed to meeting the requirements of the CALGreen Code by incorporating strategies such as low-flow toilets, low-flow faucets and other energy and resource conservation measures. The Project would comply with the City's Sustainability and Green Building Program in accordance with applicable energy, water, and waste efficiency measures specified in the Title 24 Building Energy Efficiency Standards and CALGreen standards.

At the State level, Executive Orders S-3-05 and B-30-15 are orders from the State's executive branch for the purpose of reducing GHG emissions. Executive Order S-3-05's goal is to reduce GHG emissions to 1990 levels by 2020. The executive orders also establish the goals to reduce GHG emissions to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Studies have shown that to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*,²⁹ CARB acknowledged that the measures needed to meet the 2050 goal are too far in the future to define in detail. Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the Project's impacts further relative to the 2030 and 2050 goals currently is speculative for purposes of CEQA.

²⁹ CARB, *California's 2017 Climate Change Scoping Plan (November 2017)*, accessed October 2019, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

CARB's First Update³⁰ lays the foundation for establishing broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. Many of the emission reduction strategies recommended by CARB would serve to reduce the Project's post-2020 emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the Project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the Project's emission level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero-emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the Project's emissions level.
- **Water Sector:** The Project's emissions level will be reduced as a result of further enhancements to water-conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the Project's emissions level.

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2050 targets. Therefore, given that the Project would be consistent with State-applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions, impacts would not be considered significant.

30 CARB, *First Update to the Climate Change Scoping Plan*.

APPENDIX A

CalEEMod Air Quality Emission Output Files

APPENDIX A.1

Existing Summer

INO: Yorba Linda (Existing) - Orange County, Summer

INO: Yorba Linda (Existing)

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	14.81	1000sqft	1.43	14,808.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

NOTE: Only operational emissions were used during this phase. To avoid confusion, portions of this output related to construction were removed.

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing Conditions

Land Use - Existing library on 1.43 acre site; library is 14,808 square feet

Construction Phase - Existing conditions run

Off-road Equipment -

Vehicle Trips - Based on average ITE trip generation rate for weekday and weekend. Library closed on Sundays.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.34	1.43

tblVehicleTrips	ST_TR	46.55	80.09
tblVehicleTrips	SU_TR	25.49	0.00
tblVehicleTrips	WD_TR	56.24	72.05

2.0 Emissions Summary

2.2 Overall Operational
Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Energy	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Mobile	1.9638	7.5107	23.4739	0.0771	6.3506	0.0857	6.4363	1.6982	0.0806	1.7788		7,809.1978	7,809.1978	0.3506		7,817.9622
Total	2.3039	7.5938	23.5452	0.0776	6.3506	0.0920	6.4426	1.6982	0.0870	1.7852		7,908.9551	7,908.9551	0.3525	1.8300e-003	7,918.3126

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Energy	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

Mobile	1.9638	7.5107	23.4739	0.0771	6.3506	0.0857	6.4363	1.6982	0.0806	1.7788		7,809.1978	7,809.1978	0.3506		7,817.9622
Total	2.3039	7.5938	23.5452	0.0776	6.3506	0.0920	6.4426	1.6982	0.0870	1.7852		7,908.9551	7,908.9551	0.3525	1.8300e-003	7,918.3126

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	1.9638	7.5107	23.4739	0.0771	6.3506	0.0857	6.4363	1.6982	0.0806	1.7788		7,809.1978	7,809.1978	0.3506		7,817.9622
Baseline	1.9638	7.5107	23.4739	0.0771	6.3506	0.0857	6.4363	1.6982	0.0806	1.7788		7,809.1978	7,809.1978	0.3506		7,817.9622

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Library	1,066.92	1,185.97	0.00	2,351,765	2,351,765
Total	1,066.92	1,185.97	0.00	2,351,765	2,351,765

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Condition	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
NaturalGas Baseline	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Library	847.91	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Total		9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	0.84791	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Total		9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Baseline	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0376					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2932					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Total	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0376					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2932					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Total	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX A.2

Existing Winter

INO: Yorba Linda (Existing) - Orange County, Winter

INO: Yorba Linda (Existing)
Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	14.81	1000sqft	1.43	14,808.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

NOTE: Only operational emissions were used during this phase. To avoid confusion, portions of this output related to construction were removed.

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing Conditions

Land Use - Existing library on 1.43 acre site; library is 14,808 square feet

Construction Phase - Existing conditions run

Off-road Equipment -

Vehicle Trips - Based on average ITE trip generation rate for weekday and weekend. Library closed on Sundays.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.34	1.43

tblVehicleTrips	ST_TR	46.55	80.09
tblVehicleTrips	SU_TR	25.49	0.00
tblVehicleTrips	WD_TR	56.24	72.05

2.0 Emissions Summary

2.2 Overall Operational
Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Energy	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Mobile	1.9399	7.7265	22.7477	0.0736	6.3506	0.0863	6.4369	1.6982	0.0812	1.7794		7,456.5020	7,456.5020	0.3506		7,465.2675
Total	2.2800	7.8097	22.8190	0.0741	6.3506	0.0926	6.4432	1.6982	0.0875	1.7857		7,556.2593	7,556.2593	0.3525	1.8300e-003	7,565.6178

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Energy	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

Mobile	1.9399	7.7265	22.7477	0.0736	6.3506	0.0863	6.4369	1.6982	0.0812	1.7794		7,456.5020	7,456.5020	0.3506		7,465.2675
Total	2.2800	7.8097	22.8190	0.0741	6.3506	0.0926	6.4432	1.6982	0.0875	1.7857		7,556.2593	7,556.2593	0.3525	1.8300e-003	7,565.6178

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	1.9399	7.7265	22.7477	0.0736	6.3506	0.0863	6.4369	1.6982	0.0812	1.7794		7,456.5020	7,456.5020	0.3506		7,465.2675
Baseline	1.9399	7.7265	22.7477	0.0736	6.3506	0.0863	6.4369	1.6982	0.0812	1.7794		7,456.5020	7,456.5020	0.3506		7,465.2675

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Library	1,066.92	1,185.97	0.00	2,351,765	2,351,765
Total	1,066.92	1,185.97	0.00	2,351,765	2,351,765

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Regulatory Condition	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
NaturalGas Baseline	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					

Library	847.91	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Total		9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Library	0.84791	9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469
Total		9.1400e-003	0.0831	0.0698	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003		99.7541	99.7541	1.9100e-003	1.8300e-003	100.3469

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Regulatory Compliance	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Baseline	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0376					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2932					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Total	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0376					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2932					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003
Total	0.3310	1.0000e-005	1.5300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2400e-003	3.2400e-003	1.0000e-005		3.4600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

INO: Yorba Linda (Proposed) - Orange County, Summer

INO: Yorba Linda (Proposed)
Orange County, Summer**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.87	1000sqft	1.43	3,867.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

INO: Yorba Linda (Proposed) - Orange County, Summer

Project Characteristics -

Land Use - Proposed Use on a 1.43 acre site

Construction Phase -

Off-road Equipment -

Off-road Equipment - No cranes

Off-road Equipment -

Off-road Equipment -

Demolition - Removal of existing library

Vehicle Trips - Based on average ITE trip rates provided by traffic study

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD recommends at the minimum to use off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 3 emission standards with Level 3 DPF

Fugitive Dust Mitigation Measures - SCAQMD CEQA Handbook Tables 11-4

Area Mitigation -

Water Mitigation -

[illegible]

INO: Yorba Linda (Proposed) - Orange County, Summer

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	LotAcreage	0.09	1.43
tblVehicleTrips	ST_TR	722.03	940.00
tblVehicleTrips	SU_TR	542.72	940.00

INO: Yorba Linda (Proposed) - Orange County, Summer

tblVehicleTrips	WD_TR	496.12	1,031.00
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2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.8041	20.5766	15.1213	0.0280	0.9325	1.0445	1.9770	0.1649	0.9749	1.1398	0.0000	2,741.779 3	2,741.779 3	0.6262	0.0000	2,757.432 9
Maximum	3.8041	20.5766	15.1213	0.0280	0.9325	1.0445	1.9770	0.1649	0.9749	1.1398	0.0000	2,741.779 3	2,741.779 3	0.6262	0.0000	2,757.432 9

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.6446	12.9834	16.0442	0.0280	0.4879	0.1113	0.5992	0.0976	0.1112	0.2087	0.0000	2,741.779 3	2,741.779 3	0.6262	0.0000	2,757.432 9
Maximum	3.6446	12.9834	16.0442	0.0280	0.4879	0.1113	0.5992	0.0976	0.1112	0.2087	0.0000	2,741.779 3	2,741.779 3	0.6262	0.0000	2,757.432 9

INO: Yorba Linda (Proposed) - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.19	36.90	-6.10	0.00	47.68	89.34	69.69	40.83	88.60	81.69	0.00	0.00	0.00	0.00	0.00	0.00

INO: Yorba Linda (Proposed) - Orange County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Energy	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Mobile	4.2070	13.9260	33.4547	0.1059	8.9004	0.0841	8.9846	2.3801	0.0782	2.4582		10,782.4033	10,782.4033	0.5088		10,795.1221
Total	4.3230	14.1953	33.6814	0.1076	8.9004	0.1046	9.0050	2.3801	0.0986	2.4787		11,105.6243	11,105.6243	0.5150	5.9300e-003	11,120.2638

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Energy	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Mobile	4.2070	13.9260	33.4547	0.1059	8.9004	0.0841	8.9846	2.3801	0.0782	2.4582		10,782.4033	10,782.4033	0.5088		10,795.1221
Total	4.3230	14.1953	33.6814	0.1076	8.9004	0.1046	9.0050	2.3801	0.0986	2.4787		11,105.6243	11,105.6243	0.5150	5.9300e-003	11,120.2638

INO: Yorba Linda (Proposed) - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2021	1/29/2021	5	20	Removal of existing Library
2	Building Construction	Building Construction	1/30/2021	11/5/2021	5	200	Construction of Proposed INO
3	Paving	Paving	11/6/2021	11/19/2021	5	10	Paving of surfaces
4	Architectural Coating	Architectural Coating	11/20/2021	12/3/2021	5	10	Painting of surfaces

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,801; Non-Residential Outdoor: 1,934; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

INO: Yorba Linda (Proposed) - Orange County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	67.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

INO: Yorba Linda (Proposed) - Orange County, Summer

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7288	0.0000	0.7288	0.1104	0.0000	0.1104			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.717 1	2,322.717 1	0.5940		2,337.565 8
Total	1.9930	19.6966	14.4925	0.0241	0.7288	1.0409	1.7697	0.1104	0.9715	1.0818		2,322.717 1	2,322.717 1	0.5940		2,337.565 8

INO: Yorba Linda (Proposed) - Orange County, Summer

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0241	0.8516	0.2340	2.5300e-003	0.0583	2.6800e-003	0.0610	0.0160	2.5600e-003	0.0185		282.2770	282.2770	0.0293		283.0086
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	0.0711	0.8800	0.6288	3.9000e-003	0.2036	3.6200e-003	0.2073	0.0545	3.4300e-003	0.0579		419.0622	419.0622	0.0322		419.8671

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2842	0.0000	0.2842	0.0430	0.0000	0.0430			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.1077	0.1077		0.1077	0.1077	0.0000	2,322.717 1	2,322.717 1	0.5940		2,337.565 8
Total	0.5621	12.1033	15.4154	0.0241	0.2842	0.1077	0.3920	0.0430	0.1077	0.1508	0.0000	2,322.717 1	2,322.717 1	0.5940		2,337.565 8

INO: Yorba Linda (Proposed) - Orange County, Summer

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0241	0.8516	0.2340	2.5300e-003	0.0583	2.6800e-003	0.0610	0.0160	2.5600e-003	0.0185		282.2770	282.2770	0.0293		283.0086
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	0.0711	0.8800	0.6288	3.9000e-003	0.2036	3.6200e-003	0.2073	0.0545	3.4300e-003	0.0579		419.0622	419.0622	0.0322		419.8671

3.3 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5028	9.9991	11.4123	0.0177		0.5367	0.5367		0.5250	0.5250		1,582.1659	1,582.1659	0.2217		1,587.7094
Total	1.5028	9.9991	11.4123	0.0177		0.5367	0.5367		0.5250	0.5250		1,582.1659	1,582.1659	0.2217		1,587.7094

INO: Yorba Linda (Proposed) - Orange County, Summer

3.3 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.6700e-003	0.0938	0.0254	2.5000e-004	6.3900e-003	1.9000e-004	6.5800e-003	1.8400e-003	1.9000e-004	2.0200e-003		26.8793	26.8793	2.1100e-003		26.9319
Worker	7.2200e-003	4.3700e-003	0.0608	2.1000e-004	0.0224	1.4000e-004	0.0225	5.9300e-003	1.3000e-004	6.0600e-003		21.0439	21.0439	4.5000e-004		21.0552
Total	9.8900e-003	0.0982	0.0862	4.6000e-004	0.0288	3.3000e-004	0.0291	7.7700e-003	3.2000e-004	8.0800e-003		47.9231	47.9231	2.5600e-003		47.9871

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5344	10.0209	11.1747	0.0177		0.0980	0.0980		0.0980	0.0980	0.0000	1,582.1659	1,582.1659	0.2217		1,587.7094
Total	0.5344	10.0209	11.1747	0.0177		0.0980	0.0980		0.0980	0.0980	0.0000	1,582.1659	1,582.1659	0.2217		1,587.7094

INO: Yorba Linda (Proposed) - Orange County, Summer

3.3 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.6700e-003	0.0938	0.0254	2.5000e-004	6.3900e-003	1.9000e-004	6.5800e-003	1.8400e-003	1.9000e-004	2.0200e-003		26.8793	26.8793	2.1100e-003		26.9319
Worker	7.2200e-003	4.3700e-003	0.0608	2.1000e-004	0.0224	1.4000e-004	0.0225	5.9300e-003	1.3000e-004	6.0600e-003		21.0439	21.0439	4.5000e-004		21.0552
Total	9.8900e-003	0.0982	0.0862	4.6000e-004	0.0288	3.3000e-004	0.0291	7.7700e-003	3.2000e-004	8.0800e-003		47.9231	47.9231	2.5600e-003		47.9871

3.4 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442

INO: Yorba Linda (Proposed) - Orange County, Summer

3.4 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0135		0.0580	0.0580		0.0580	0.0580	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3195	6.6399	9.8512	0.0135		0.0580	0.0580		0.0580	0.0580	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

INO: Yorba Linda (Proposed) - Orange County, Summer

3.4 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585

3.5 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	3.8041	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

INO: Yorba Linda (Proposed) - Orange County, Summer

3.5 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0193		281.9309
Total	3.6446	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0193		281.9309

INO: Yorba Linda (Proposed) - Orange County, Summer

3.5 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

INO: Yorba Linda (Proposed) - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2070	13.9260	33.4547	0.1059	8.9004	0.0841	8.9846	2.3801	0.0782	2.4582		10,782.40 33	10,782.40 33	0.5088		10,795.12 21
Unmitigated	4.2070	13.9260	33.4547	0.1059	8.9004	0.0841	8.9846	2.3801	0.0782	2.4582		10,782.40 33	10,782.40 33	0.5088		10,795.12 21

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930
Total	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

5.0 Energy Detail

INO: Yorba Linda (Proposed) - Orange County, Summer

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
NaturalGas Unmitigated	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2747.37	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Total		0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

INO: Yorba Linda (Proposed) - Orange County, Summer

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2.74737	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Total		0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

INO: Yorba Linda (Proposed) - Orange County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Unmitigated	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Total	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

INO: Yorba Linda (Proposed) - Orange County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Total	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

INO: Yorba Linda (Proposed) - Orange County, Summer

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX A.4

Proposed Winter

INO: Yorba Linda (Proposed) - Orange County, Winter

INO: Yorba Linda (Proposed)
Orange County, Winter**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.87	1000sqft	1.43	3,867.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

INO: Yorba Linda (Proposed) - Orange County, Winter

Project Characteristics -

Land Use - Proposed Use on a 1.43 acre site

Construction Phase -

Off-road Equipment -

Off-road Equipment - No cranes

Off-road Equipment -

Off-road Equipment -

Demolition - Removal of existing library

Vehicle Trips - Based on average ITE trip rates provided by traffic study

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD recommends at the minimum to use off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 3 emission standards with Level 3 DPF

Fugitive Dust Mitigation Measures - SCAQMD CEQA Handbook Tables 11-4

Area Mitigation -

Water Mitigation -

[illegible]

INO: Yorba Linda (Proposed) - Orange County, Winter

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	LotAcreage	0.09	1.43
tblVehicleTrips	ST_TR	722.03	940.00
tblVehicleTrips	SU_TR	542.72	940.00

INO: Yorba Linda (Proposed) - Orange County, Winter

tblVehicleTrips	:	WD_TR	:	496.12	:	1,031.00
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2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.8041	20.5895	15.1025	0.0279	0.9325	1.0446	1.9770	0.1649	0.9750	1.1398	0.0000	2,730.175 1	2,730.175 1	0.6266	0.0000	2,745.841 2
Maximum	3.8041	20.5895	15.1025	0.0279	0.9325	1.0446	1.9770	0.1649	0.9750	1.1398	0.0000	2,730.175 1	2,730.175 1	0.6266	0.0000	2,745.841 2

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.6446	12.9962	16.0254	0.0279	0.4879	0.1114	0.5993	0.0976	0.1112	0.2087	0.0000	2,730.175 1	2,730.175 1	0.6266	0.0000	2,745.841 2
Maximum	3.6446	12.9962	16.0254	0.0279	0.4879	0.1114	0.5993	0.0976	0.1112	0.2087	0.0000	2,730.175 1	2,730.175 1	0.6266	0.0000	2,745.841 2

INO: Yorba Linda (Proposed) - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.19	36.88	-6.11	0.00	47.68	89.34	69.69	40.83	88.59	81.69	0.00	0.00	0.00	0.00	0.00	0.00

INO: Yorba Linda (Proposed) - Orange County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Energy	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Mobile	4.1391	14.0369	33.8240	0.1010	8.9004	0.0851	8.9855	2.3801	0.0790	2.4591		10,282.2338	10,282.2338	0.5216		10,295.2728
Total	4.2552	14.3063	34.0507	0.1027	8.9004	0.1055	9.0060	2.3801	0.0995	2.4796		10,605.4548	10,605.4548	0.5278	5.9300e-003	10,620.4145

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Energy	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Mobile	4.1391	14.0369	33.8240	0.1010	8.9004	0.0851	8.9855	2.3801	0.0790	2.4591		10,282.2338	10,282.2338	0.5216		10,295.2728
Total	4.2552	14.3063	34.0507	0.1027	8.9004	0.1055	9.0060	2.3801	0.0995	2.4796		10,605.4548	10,605.4548	0.5278	5.9300e-003	10,620.4145

INO: Yorba Linda (Proposed) - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2021	1/29/2021	5	20	Removal of existing Library
2	Building Construction	Building Construction	1/30/2021	11/5/2021	5	200	Construction of Proposed INO
3	Paving	Paving	11/6/2021	11/19/2021	5	10	Paving of surfaces
4	Architectural Coating	Architectural Coating	11/20/2021	12/3/2021	5	10	Painting of surfaces

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,801; Non-Residential Outdoor: 1,934; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

INO: Yorba Linda (Proposed) - Orange County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	67.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

INO: Yorba Linda (Proposed) - Orange County, Winter

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7288	0.0000	0.7288	0.1104	0.0000	0.1104			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.717 1	2,322.717 1	0.5940		2,337.565 8
Total	1.9930	19.6966	14.4925	0.0241	0.7288	1.0409	1.7697	0.1104	0.9715	1.0818		2,322.717 1	2,322.717 1	0.5940		2,337.565 8

INO: Yorba Linda (Proposed) - Orange County, Winter

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0247	0.8617	0.2456	2.4900e-003	0.0583	2.7200e-003	0.0611	0.0160	2.6100e-003	0.0186		277.9999	277.9999	0.0299		278.7479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	0.0778	0.8929	0.6100	3.7900e-003	0.2036	3.6600e-003	0.2073	0.0545	3.4800e-003	0.0580		407.4581	407.4581	0.0327		408.2754

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2842	0.0000	0.2842	0.0430	0.0000	0.0430			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.1077	0.1077		0.1077	0.1077	0.0000	2,322.717 1	2,322.717 1	0.5940		2,337.565 8
Total	0.5621	12.1033	15.4154	0.0241	0.2842	0.1077	0.3920	0.0430	0.1077	0.1508	0.0000	2,322.717 1	2,322.717 1	0.5940		2,337.565 8

INO: Yorba Linda (Proposed) - Orange County, Winter

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0247	0.8617	0.2456	2.4900e-003	0.0583	2.7200e-003	0.0611	0.0160	2.6100e-003	0.0186		277.9999	277.9999	0.0299		278.7479
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	0.0778	0.8929	0.6100	3.7900e-003	0.2036	3.6600e-003	0.2073	0.0545	3.4800e-003	0.0580		407.4581	407.4581	0.0327		408.2754

3.3 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5028	9.9991	11.4123	0.0177		0.5367	0.5367		0.5250	0.5250		1,582.1659	1,582.1659	0.2217		1,587.7094
Total	1.5028	9.9991	11.4123	0.0177		0.5367	0.5367		0.5250	0.5250		1,582.1659	1,582.1659	0.2217		1,587.7094

INO: Yorba Linda (Proposed) - Orange County, Winter

3.3 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8000e-003	0.0936	0.0279	2.4000e-004	6.3900e-003	2.0000e-004	6.5900e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.2189	26.2189	2.2100e-003		26.2742
Worker	8.1700e-003	4.8000e-003	0.0561	2.0000e-004	0.0224	1.4000e-004	0.0225	5.9300e-003	1.3000e-004	6.0600e-003		19.9166	19.9166	4.3000e-004		19.9273
Total	0.0110	0.0984	0.0840	4.4000e-004	0.0288	3.4000e-004	0.0291	7.7700e-003	3.2000e-004	8.0900e-003		46.1355	46.1355	2.6400e-003		46.2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5344	10.0209	11.1747	0.0177		0.0980	0.0980		0.0980	0.0980	0.0000	1,582.1659	1,582.1659	0.2217		1,587.7094
Total	0.5344	10.0209	11.1747	0.0177		0.0980	0.0980		0.0980	0.0980	0.0000	1,582.1659	1,582.1659	0.2217		1,587.7094

INO: Yorba Linda (Proposed) - Orange County, Winter

3.3 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8000e-003	0.0936	0.0279	2.4000e-004	6.3900e-003	2.0000e-004	6.5900e-003	1.8400e-003	1.9000e-004	2.0300e-003		26.2189	26.2189	2.2100e-003		26.2742
Worker	8.1700e-003	4.8000e-003	0.0561	2.0000e-004	0.0224	1.4000e-004	0.0225	5.9300e-003	1.3000e-004	6.0600e-003		19.9166	19.9166	4.3000e-004		19.9273
Total	0.0110	0.0984	0.0840	4.4000e-004	0.0288	3.4000e-004	0.0291	7.7700e-003	3.2000e-004	8.0900e-003		46.1355	46.1355	2.6400e-003		46.2015

3.4 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442

INO: Yorba Linda (Proposed) - Orange County, Winter

3.4 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3195	6.6399	9.8512	0.0135		0.0580	0.0580		0.0580	0.0580	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3195	6.6399	9.8512	0.0135		0.0580	0.0580		0.0580	0.0580	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

INO: Yorba Linda (Proposed) - Orange County, Winter

3.4 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275

3.5 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	3.8041	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

INO: Yorba Linda (Proposed) - Orange County, Winter

3.5 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0193		281.9309
Total	3.6446	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0193		281.9309

INO: Yorba Linda (Proposed) - Orange County, Winter

3.5 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

INO: Yorba Linda (Proposed) - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1391	14.0369	33.8240	0.1010	8.9004	0.0851	8.9855	2.3801	0.0790	2.4591		10,282.23 38	10,282.23 38	0.5216		10,295.27 28
Unmitigated	4.1391	14.0369	33.8240	0.1010	8.9004	0.0851	8.9855	2.3801	0.0790	2.4591		10,282.23 38	10,282.23 38	0.5216		10,295.27 28

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930
Total	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

5.0 Energy Detail

INO: Yorba Linda (Proposed) - Orange County, Winter

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
NaturalGas Unmitigated	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2747.37	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Total		0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

INO: Yorba Linda (Proposed) - Orange County, Winter

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2.74737	0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409
Total		0.0296	0.2694	0.2263	1.6200e-003		0.0205	0.0205		0.0205	0.0205		323.2201	323.2201	6.2000e-003	5.9300e-003	325.1409

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

INO: Yorba Linda (Proposed) - Orange County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Unmitigated	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Total	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

INO: Yorba Linda (Proposed) - Orange County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.8200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004
Total	0.0864	0.0000	4.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.5000e-004	8.5000e-004	0.0000		9.0000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

INO: Yorba Linda (Proposed) - Orange County, Winter

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B

CalEEMod Greenhouse Gas Emission Output Files

APPENDIX B.1

Existing Annual

INO: Yorba Linda (Existing) - Orange County, Annual

INO: Yorba Linda (Existing) Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	14.81	1000sqft	1.43	14,808.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

NOTE: Only operational emissions were used during this phase. To avoid confusion, portions of this output related to construction were removed.

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Existing Conditions

Land Use - Existing library on 1.43 acre site; library is 14,808 square feet

Construction Phase - Existing conditions run

Off-road Equipment -

Vehicle Trips - Based on average ITE trip generation rate for weekday and weekend. Library closed on Sundays.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.34	1.43

tblVehicleTrips	ST_TR	46.55	80.09
tblVehicleTrips	SU_TR	25.49	0.00
tblVehicleTrips	WD_TR	56.24	72.05

2.0 Emissions Summary

2.2 Overall Operational
Baseline Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Energy	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	56.3838	56.3838	1.9600e-003	6.4000e-004	56.6245
Mobile	0.2682	1.1236	3.2853	0.0107	0.8918	0.0123	0.9041	0.2388	0.0115	0.2504	0.0000	979.1564	979.1564	0.0453	0.0000	980.2885
Waste						0.0000	0.0000		0.0000	0.0000	2.7688	0.0000	2.7688	0.1636	0.0000	6.8596
Water						0.0000	0.0000		0.0000	0.0000	0.1470	4.4882	4.6352	0.0153	3.9000e-004	5.1350
Total	0.3303	1.1388	3.2983	0.0107	0.8918	0.0134	0.9053	0.2388	0.0127	0.2515	2.9158	1,040.0287	1,042.9445	0.2262	1.0300e-003	1,048.9080

Regulatory Compliance Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

Energy	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	56.3838	56.3838	1.9600e-003	6.4000e-004	56.6245
Mobile	0.2682	1.1236	3.2853	0.0107	0.8918	0.0123	0.9041	0.2388	0.0115	0.2504	0.0000	979.1564	979.1564	0.0453	0.0000	980.2885
Waste						0.0000	0.0000		0.0000	0.0000	2.7688	0.0000	2.7688	0.1636	0.0000	6.8596
Water						0.0000	0.0000		0.0000	0.0000	0.1470	4.4882	4.6352	0.0153	3.9000e-004	5.1350
Total	0.3303	1.1388	3.2983	0.0107	0.8918	0.0134	0.9053	0.2388	0.0127	0.2515	2.9158	1,040.0287	1,042.9445	0.2262	1.0300e-003	1,048.9080

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	0.2682	1.1236	3.2853	0.0107	0.8918	0.0123	0.9041	0.2388	0.0115	0.2504	0.0000	979.1564	979.1564	0.0453	0.0000	980.2885
Baseline	0.2682	1.1236	3.2853	0.0107	0.8918	0.0123	0.9041	0.2388	0.0115	0.2504	0.0000	979.1564	979.1564	0.0453	0.0000	980.2885

4.2 Trip Summary Information

	Average Daily Trip Rate			Baseline	Regulatory Compliance
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Library	1,066.92	1,185.97	0.00	2,351,765	2,351,765
Total	1,066.92	1,185.97	0.00	2,351,765	2,351,765

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.552373	0.044229	0.211123	0.119112	0.017503	0.005797	0.024455	0.015685	0.001637	0.001633	0.004830	0.000583	0.001041

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Regulatory						0.0000	0.0000		0.0000	0.0000	0.0000	39.8683	39.8683	1.6500e-003	3.4000e-004	40.0110
Electricity Baseline						0.0000	0.0000		0.0000	0.0000	0.0000	39.8683	39.8683	1.6500e-003	3.4000e-004	40.0110
NaturalGas Regulatory	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136
NaturalGas Baseline	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136

5.2 Energy by Land Use - NaturalGas

Baseline

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	309487	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136
Total		1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136

Regulatory Compliance

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	309487	1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136
Total		1.6700e-003	0.0152	0.0127	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5154	16.5154	3.2000e-004	3.0000e-004	16.6136

5.3 Energy by Land Use - Electricity

Baseline

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	125128	39.8683	1.6500e-003	3.4000e-004	40.0110

Total		39.8683	1.6500e-003	3.4000e-004	40.0110
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Regulatory Compliance

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	125128	39.8683	1.6500e-003	3.4000e-004	40.0110
Total		39.8683	1.6500e-003	3.4000e-004	40.0110

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Regulatory Compliance	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Baseline	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

6.2 Area by SubCategory

Baseline

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0535					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Total	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

Regulatory Compliance

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0535					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004
Total	0.0604	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	3.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Regulatory Compliance	4.6352	0.0153	3.9000e-004	5.1350
Baseline	4.6352	0.0153	3.9000e-004	5.1350

7.2 Water by Land Use

Baseline

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Library	0.463389 / 0.724788	4.6352	0.0153	3.9000e-004	5.1350
Total		4.6352	0.0153	3.9000e-004	5.1350

Regulatory Compliance

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Library	0.463389 / 0.724788	4.6352	0.0153	3.9000e- 004	5.1350
Total		4.6352	0.0153	3.9000e- 004	5.1350

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Regulatory Compliance	2.7688	0.1636	0.0000	6.8596
Baseline	2.7688	0.1636	0.0000	6.8596

8.2 Waste by Land Use

Baseline

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	13.64	2.7688	0.1636	0.0000	6.8596
Total		2.7688	0.1636	0.0000	6.8596

Regulatory Compliance

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	13.64	2.7688	0.1636	0.0000	6.8596
Total		2.7688	0.1636	0.0000	6.8596

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B.2

Proposed Annual

INO: Yorba Linda (Proposed) - Orange County, Annual

INO: Yorba Linda (Proposed)
Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.87	1000sqft	1.43	3,867.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

INO: Yorba Linda (Proposed) - Orange County, Annual

Project Characteristics -

Land Use - Proposed Use on a 1.43 acre site

Construction Phase -

Off-road Equipment -

Off-road Equipment - No cranes

Off-road Equipment -

Off-road Equipment -

Demolition - Removal of existing library

Vehicle Trips - Based on average ITE trip rates provided by traffic study

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD recommends at the minimum to use off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 3 emission standards with Level 3 DPF

Fugitive Dust Mitigation Measures - SCAQMD CEQA Handbook Tables 11-4

Area Mitigation -

Water Mitigation -

[illegible]

INO: Yorba Linda (Proposed) - Orange County, Annual

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	LotAcreage	0.09	1.43
tblVehicleTrips	ST_TR	722.03	940.00
tblVehicleTrips	SU_TR	542.72	940.00

INO: Yorba Linda (Proposed) - Orange County, Annual

tblVehicleTrips	WD_TR	496.12	1,031.00
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1951	1.2625	1.3559	2.1900e-003	0.0128	0.0667	0.0795	2.5900e-003	0.0647	0.0673	0.0000	180.3428	180.3428	0.0280	0.0000	181.0427
Maximum	0.1951	1.2625	1.3559	2.1900e-003	0.0128	0.0667	0.0795	2.5900e-003	0.0647	0.0673	0.0000	180.3428	180.3428	0.0280	0.0000	181.0427

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0809	1.1824	1.3464	2.1900e-003	8.3800e-003	0.0113	0.0197	1.9200e-003	0.0113	0.0132	0.0000	180.3426	180.3426	0.0280	0.0000	181.0425
Maximum	0.0809	1.1824	1.3464	2.1900e-003	8.3800e-003	0.0113	0.0197	1.9200e-003	0.0113	0.0132	0.0000	180.3426	180.3426	0.0280	0.0000	181.0425

INO: Yorba Linda (Proposed) - Orange County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	58.55	6.35	0.70	0.00	34.68	83.03	75.23	25.87	82.51	80.33	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2021	4-1-2021	0.4837	0.3725
2	4-2-2021	7-1-2021	0.3773	0.3466
3	7-2-2021	9-30-2021	0.3773	0.3466
		Highest	0.4837	0.3725

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004
Energy	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	98.4601	98.4601	2.8800e-003	1.3600e-003	98.9389
Mobile	0.7034	2.5261	5.9982	0.0182	1.5513	0.0150	1.5662	0.4154	0.0139	0.4294	0.0000	1,679.1598	1,679.1598	0.0828	0.0000	1,681.2296
Waste						0.0000	0.0000		0.0000	0.0000	9.0493	0.0000	9.0493	0.5348	0.0000	22.4194
Water						0.0000	0.0000		0.0000	0.0000	0.3727	5.1389	5.5116	0.0385	9.5000e-004	6.7562
Total	0.7245	2.5753	6.0395	0.0185	1.5513	0.0187	1.5700	0.4154	0.0177	0.4331	9.4220	1,782.7589	1,792.1809	0.6590	2.3100e-003	1,809.3441

INO: Yorba Linda (Proposed) - Orange County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004
Energy	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	98.4601	98.4601	2.8800e-003	1.3600e-003	98.9389
Mobile	0.7034	2.5261	5.9982	0.0182	1.5513	0.0150	1.5662	0.4154	0.0139	0.4294	0.0000	1,679.1598	1,679.1598	0.0828	0.0000	1,681.2296
Waste						0.0000	0.0000		0.0000	0.0000	9.0493	0.0000	9.0493	0.5348	0.0000	22.4194
Water						0.0000	0.0000		0.0000	0.0000	0.2981	4.1480	4.4461	0.0308	7.6000e-004	5.4420
Total	0.7245	2.5753	6.0395	0.0185	1.5513	0.0187	1.5700	0.4154	0.0177	0.4331	9.3475	1,781.7680	1,791.1155	0.6513	2.1200e-003	1,808.0299

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.06	0.06	1.17	8.23	0.07

3.0 Construction Detail**Construction Phase**

INO: Yorba Linda (Proposed) - Orange County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2021	1/29/2021	5	20	Removal of existing Library
2	Building Construction	Building Construction	1/30/2021	11/5/2021	5	200	Construction of Proposed INO
3	Paving	Paving	11/6/2021	11/19/2021	5	10	Paving of surfaces
4	Architectural Coating	Architectural Coating	11/20/2021	12/3/2021	5	10	Painting of surfaces

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,801; Non-Residential Outdoor: 1,934; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

INO: Yorba Linda (Proposed) - Orange County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	67.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

INO: Yorba Linda (Proposed) - Orange County, Annual

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.2900e-003	0.0000	7.2900e-003	1.1000e-003	0.0000	1.1000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	0.0199	0.1970	0.1449	2.4000e-004	7.2900e-003	0.0104	0.0177	1.1000e-003	9.7100e-003	0.0108	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

INO: Yorba Linda (Proposed) - Orange County, Annual

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	8.7800e-003	2.3900e-003	3.0000e-005	5.7000e-004	3.0000e-005	6.0000e-004	1.6000e-004	3.0000e-005	1.8000e-004	0.0000	2.5445	2.5445	2.7000e-004	0.0000	2.5512
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1924	1.1924	3.0000e-005	0.0000	1.1930
Total	7.2000e-004	9.1000e-003	6.1200e-003	4.0000e-005	2.0000e-003	4.0000e-005	2.0400e-003	5.4000e-004	4.0000e-005	5.7000e-004	0.0000	3.7368	3.7368	3.0000e-004	0.0000	3.7442

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.8400e-003	0.0000	2.8400e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.1210	0.1542	2.4000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	5.6200e-003	0.1210	0.1542	2.4000e-004	2.8400e-003	1.0800e-003	3.9200e-003	4.3000e-004	1.0800e-003	1.5100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

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3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	8.7800e-003	2.3900e-003	3.0000e-005	5.7000e-004	3.0000e-005	6.0000e-004	1.6000e-004	3.0000e-005	1.8000e-004	0.0000	2.5445	2.5445	2.7000e-004	0.0000	2.5512
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1924	1.1924	3.0000e-005	0.0000	1.1930
Total	7.2000e-004	9.1000e-003	6.1200e-003	4.0000e-005	2.0000e-003	4.0000e-005	2.0400e-003	5.4000e-004	4.0000e-005	5.7000e-004	0.0000	3.7368	3.7368	3.0000e-004	0.0000	3.7442

3.3 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1503	0.9999	1.1412	1.7700e-003		0.0537	0.0537		0.0525	0.0525	0.0000	143.5317	143.5317	0.0201	0.0000	144.0346
Total	0.1503	0.9999	1.1412	1.7700e-003		0.0537	0.0537		0.0525	0.0525	0.0000	143.5317	143.5317	0.0201	0.0000	144.0346

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3.3 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	9.5300e-003	2.6700e-003	2.0000e-005	6.3000e-004	2.0000e-005	6.5000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	2.4133	2.4133	2.0000e-004	0.0000	2.4182
Worker	7.3000e-004	4.9000e-004	5.7500e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8344	1.8344	4.0000e-005	0.0000	1.8354
Total	1.0000e-003	0.0100	8.4200e-003	4.0000e-005	2.8300e-003	3.0000e-005	2.8600e-003	7.6000e-004	3.0000e-005	8.0000e-004	0.0000	4.2477	4.2477	2.4000e-004	0.0000	4.2535

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0534	1.0021	1.1175	1.7700e-003		9.8000e-003	9.8000e-003		9.8000e-003	9.8000e-003	0.0000	143.5315	143.5315	0.0201	0.0000	144.0344
Total	0.0534	1.0021	1.1175	1.7700e-003		9.8000e-003	9.8000e-003		9.8000e-003	9.8000e-003	0.0000	143.5315	143.5315	0.0201	0.0000	144.0344

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3.3 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7000e-004	9.5300e-003	2.6700e-003	2.0000e-005	6.3000e-004	2.0000e-005	6.5000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	2.4133	2.4133	2.0000e-004	0.0000	2.4182
Worker	7.3000e-004	4.9000e-004	5.7500e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8344	1.8344	4.0000e-005	0.0000	1.8354
Total	1.0000e-003	0.0100	8.4200e-003	4.0000e-005	2.8300e-003	3.0000e-005	2.8600e-003	7.6000e-004	3.0000e-005	8.0000e-004	0.0000	4.2477	4.2477	2.4000e-004	0.0000	4.2535

3.4 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.8700e-003	0.0387	0.0443	7.0000e-005		2.0800e-003	2.0800e-003		1.9100e-003	1.9100e-003	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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3.4 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965
Total	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6000e-003	0.0332	0.0493	7.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-003	0.0332	0.0493	7.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	5.8825	5.8825	1.8600e-003	0.0000	5.9291

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3.4 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965
Total	2.4000e-004	1.6000e-004	1.8700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5962	0.5962	1.0000e-005	0.0000	0.5965

3.5 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0179					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.0190	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

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3.5 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0179					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	0.0182	6.7800e-003	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788

INO: Yorba Linda (Proposed) - Orange County, Annual

3.5 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

INO: Yorba Linda (Proposed) - Orange County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7034	2.5261	5.9982	0.0182	1.5513	0.0150	1.5662	0.4154	0.0139	0.4294	0.0000	1,679.1598	1,679.1598	0.0828	0.0000	1,681.2296
Unmitigated	0.7034	2.5261	5.9982	0.0182	1.5513	0.0150	1.5662	0.4154	0.0139	0.4294	0.0000	1,679.1598	1,679.1598	0.0828	0.0000	1,681.2296

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930
Total	3,986.88	3,634.98	3,634.98	4,089,930	4,089,930

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

5.0 Energy Detail

INO: Yorba Linda (Proposed) - Orange County, Annual

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.9473	44.9473	1.8600e-003	3.8000e-004	45.1081
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.9473	44.9473	1.8600e-003	3.8000e-004	45.1081
NaturalGas Mitigated	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307
NaturalGas Unmitigated	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307

INO: Yorba Linda (Proposed) - Orange County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	1.00279e+006	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307
Total		5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	1.00279e+006	5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307
Total		5.4100e-003	0.0492	0.0413	2.9000e-004		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	53.5127	53.5127	1.0300e-003	9.8000e-004	53.8307

INO: Yorba Linda (Proposed) - Orange County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	141068	44.9473	1.8600e-003	3.8000e-004	45.1081
Total		44.9473	1.8600e-003	3.8000e-004	45.1081

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	141068	44.9473	1.8600e-003	3.8000e-004	45.1081
Total		44.9473	1.8600e-003	3.8000e-004	45.1081

6.0 Area Detail**6.1 Mitigation Measures Area**

INO: Yorba Linda (Proposed) - Orange County, Annual

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004
Unmitigated	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004

INO: Yorba Linda (Proposed) - Orange County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004
Total	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004
Total	0.0158	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4461	0.0308	7.6000e-004	5.4420
Unmitigated	5.5116	0.0385	9.5000e-004	6.7562

INO: Yorba Linda (Proposed) - Orange County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	1.17468 / 0.0749793	5.5116	0.0385	9.5000e-004	6.7562
Total		5.5116	0.0385	9.5000e-004	6.7562

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.93974 / 0.0704056	4.4461	0.0308	7.6000e-004	5.4420
Total		4.4461	0.0308	7.6000e-004	5.4420

8.0 Waste Detail**8.1 Mitigation Measures Waste**

INO: Yorba Linda (Proposed) - Orange County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.0493	0.5348	0.0000	22.4194
Unmitigated	9.0493	0.5348	0.0000	22.4194

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	44.58	9.0493	0.5348	0.0000	22.4194
Total		9.0493	0.5348	0.0000	22.4194

INO: Yorba Linda (Proposed) - Orange County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	44.58	9.0493	0.5348	0.0000	22.4194
Total		9.0493	0.5348	0.0000	22.4194

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

INO: Yorba Linda (Proposed) - Orange County, Annual

A.2 - Energy Calculations

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Yorba Linda In-N-Out Restaurant Project Energy Use Summary

Summary of Energy Use During Construction

(Annually)

Construction vehicle miles traveled	9,171 miles
Construction vehicle fuel	418 gallons (gasoline, diesel)
Construction equipment fuel	13,893 gallons (diesel)
Construction office electricity	8,058 kilowatt hours

Summary of Energy Use During Operations

(Annually)

Operation vehicle miles traveled	2,070,804 miles
Operation vehicle fuel	80,502 gallons (gasoline, diesel)
Operation natural gas	996,307 kilo-British Thermal Units
Operation electricity	140,156 kilowatt hours

California Air Resource Board (ARB). 2020. EMFAC2014 Web Database. Website: <https://www.arb.ca.gov/emfac/2014/>. Accessed April 16, 2020.

EMFAC2014 (v1.0.7) Emissions Inventory

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MidYr	Speed	Fuel	Calculations				
						Population	VMT (mi/day)	Fuel_Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Orange	2021	HHDT	Aggregated	Aggregated	GAS	128.5852278	16258.61022	3.367125243	4.828632453	78506.85295
Orange	2021	HHDT	Aggregated	Aggregated	DSL	10366.9214	1340590.535	235.3444459	5.696291364	7636394.287
Orange	2021	LDA	Aggregated	Aggregated	GAS	123956.224	43244684.59	1463.14846	29.55591027	1278136017
Orange	2021	LDA	Aggregated	Aggregated	DSL	19341.4453	477034.8899	12.1993783	39.10337491	18653674.15
Orange	2021	LD1	Aggregated	Aggregated	GAS	104645.1444	3542957.13	144.4706206	25.0435739	89728680.6
Orange	2021	LD1	Aggregated	Aggregated	DSL	23.93053988	2263.744647	67.0516213	30.1157171	68174.29339
Orange	2021	LD2	Aggregated	Aggregated	GAS	450769.0631	1706148.131	770.2546703	22.15048814	377919563.8
Orange	2021	LD2	Aggregated	Aggregated	DSL	807.4190903	33663.60299	1311281772	29.75704354	1001729.36
Orange	2021	LDH1	Aggregated	Aggregated	GAS	23021.07059	641361.2941	57.95815643	11.06593677	7097263.524
Orange	2021	LDH1	Aggregated	Aggregated	DSL	19458.83182	671287.2512	32.50589988	26.05124342	13862916.43
Orange	2021	LDH2	Aggregated	Aggregated	GAS	4982.18312	166918.0473	16.19124443	10.30915493	1270784.01
Orange	2021	LDH2	Aggregated	Aggregated	DSL	8012.57359	304884.8869	16.08205812	18.98507642	5780030.986
Orange	2021	MHDT	Aggregated	Aggregated	GAS	4525.452523	195383.6661	27.93092235	6.995245757	1366756.761
Orange	2021	MHDT	Aggregated	Aggregated	DSL	32187.70291	1877904.208	215.5058397	18.71393652	16369398.06

Sum of VMT*FE (Column BI) 1764508120

Total VMT 64362090.09

Weighted Average FE 27.41533281

Sum of VMT*FE (Column BI) 53906590.91

Total VMT 5214588.498

Weighted Average FE 10.33765002

Sum of VMT*FE (Column BI)	7714901.14
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Total VMT	1356849.145
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Weighted Average FE 5.685894536

Source: AQ/GHG Appendix, CalEEMod Output

Yorba Linda (Proposed) - Orange County, Annual

Date: 10/4/2019 11:11 PM

Construction Schedule	Phase Name	Phase Type	Start Date	End Date	Week		Num Days											
	Building Construction	Building Construction	1/30/2021	11/5/2021	5	200												
	Paving	Paving	11/5/2021	11/18/2021	5	10												
	Architectural Coating	Architectural Coating	11/5/2021	11/18/2021	5	10												
Trips and VMT	Phase Name	Trips per Day	Total Trips							Trips per Phase	VMT per Phase				Fuel Consumption (gallons)			
	Worker Trip Number	Vendor Number	Hauling Trip Length	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Num Days	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips		
	Building Construction	2	1	0	14.7	6.9	20	200	400	200	0	5,880	1,380	0	214.48	133.49	0.00	
	Paving	13	0	0	14.7	6.9	20	10	130	0	0	1,911	0	0	69.71	0.00	0.00	
	Architectural Coating	0	0	0	14.7	6.9	20	10	0	0	0	0	0	0	0.00	0.00	0.00	
Total Construction VMT (miles)																		
9,171																		
Total Fuel Consumption (gallons)																		
418																		

Construction Equipment Fuel Calculation

Source: AQ/GHG Appendix, CalEEMod Output
Yorba Linda (Proposed) - Orange County, Annual
Date: 10/4/2019 11:11 PM

Construction Schedule	Phase Name	Phase Type	Start Date	End Date	Num Days		Load	Number of	HP Hours	Diesel Fuel Usage
					Week	Num Days				
Construction Schedule	Building Construction	Building Construction	1/30/2021	11/5/2021	5	200				
	Paving	Paving	11/5/2021	11/18/2021	5	10				
	Architectural Coating	Architectural Coating	11/5/2021	11/18/2021	5	10				
Construction Equipment	Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Factor	Days	HP Hours	Diesel Fuel Usage	
	Building Construction	Forklifts	1	6	89	0.2	200	21,360.00	1,068.00	
	Building Construction	Generator Sets	1	8	84	0.74	200	99,456.00	4,972.80	
	Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37	200	43,068.00	2,153.40	
	Building Construction	Welders	3	8	46	0.45	200	99,360.00	4,968.00	
	Paving	Cement and Mortar Mixers	1	6	9	0.56	10	302.40	15.12	
	Paving	Pavers	1	6	130	0.42	10	3,276.00	163.80	
	Paving	Paving Equipment	1	8	132	0.36	10	3,801.60	190.08	
	Paving	Rollers	1	7	80	0.38	10	2,128.00	106.40	
	Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	10	2,871.20	143.56	
	Architectural Coating	Air Compressors	1	6	78	0.48	10	2,246.40	112.32	
	Total Construction Equipment Fuel Consumption									13,893.48 gallons

Notes:

Equipment assumptions are provided in the CalEEMod output files.

Fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

South Coast Air Quality Management District. 1993. Air Quality Handbook, Table A9-3E.

Website: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>. Accessed April 18, 2019.

Construction Office Electricity Calculation

Energy Appendix: CalEEMod Typical Construction Trailer

Typical Construction Trailer - Orange County, Annual

Date: 4/16/2020 12:03 PM

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	10072.8	3.2094	1.3000e- 004	3.0000e- 005	3.2209
Total		3.2094	1.3000e- 004	3.0000e- 005	3.2209

kWh/yr = kilowatt hours per year

Energy by Land Use - Electricity

Annual 10,073 kWh/yr

Total Over Construction 8,058 kWh

Total Construction Schedule

Start 1/30/2021

End 11/18/2021

Total Calendar Days 292

Years 0.80

Proposed Operation Fuel Calculation
 California Air Resource Board (ARB). 2020. EMFAC2014 Web Database. Website: <https://www.arb.ca.gov/emfac/2014/>. Accessed April 16, 2020.

EMFAC2014 (v1.0.7) Emissions Inventory
 Region Type: County
 Region: Orange
 Calendar Year: 2022
 Season: Annual
 Vehicle Classification: EMFAC2007 Categories
 Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

VMT = Vehicle Miles Traveled
 FE = Fuel Economy

Given						Calculations				
Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
Orange	2022	HHDT	Aggregated	Aggregated	GAS	136.705615	17110.6358	3.514533555	4.868537	83303.75965
Orange	2022	HHDT	Aggregated	Aggregated	DSL	10588.2549	1386383.2	240.0200687	5.776114	8007906.998
Orange	2022	LDA	Aggregated	Aggregated	GAS	1347756.56	43186802.7	1417.409009	30.46884	1315851613
Orange	2022	LDA	Aggregated	Aggregated	DSL	14760.1243	493620.708	12.26348349	40.25126	19868857.28
Orange	2022	LDT1	Aggregated	Aggregated	GAS	105447.713	3543381.3	137.0006654	25.86397	91645912.77
Orange	2022	LDT1	Aggregated	Aggregated	DSL	90.4493558	2237.23832	0.07190658	31.11312	69607.47268
Orange	2022	LDT2	Aggregated	Aggregated	GAS	457566.505	17132408.4	746.1065477	22.96242	393401476.4
Orange	2022	LDT2	Aggregated	Aggregated	DSL	859.782911	34780.6981	1.135398871	30.63302	1065437.872
Orange	2022	LHDT1	Aggregated	Aggregated	GAS	21801.9767	599144.148	53.94021758	11.10756	6655028.957
Orange	2022	LHDT1	Aggregated	Aggregated	DSL	19857.7177	674835.807	32.40247596	20.82667	14054585.44
Orange	2022	LHDT2	Aggregated	Aggregated	GAS	4900.52799	163242.73	15.74147652	10.37023	1692864.641
Orange	2022	LHDT2	Aggregated	Aggregated	DSL	8318.37615	311655.453	16.28657695	19.13572	5963752.973
Orange	2022	MCY	Aggregated	Aggregated	GAS	62594.3457	403694.941	11.18994471	36.07658	14563933.04
Orange	2022	MDV	Aggregated	Aggregated	GAS	294388.742	8974364.15	537.1983417	16.70587	149924535.5
Orange	2022	MDV	Aggregated	Aggregated	DSL	5365.69118	190257.034	8.091580117	23.51296	4473506.826
Orange	2022	MH	Aggregated	Aggregated	GAS	7391.22807	58051.9954	7.820601308	7.422958	430917.5258
Orange	2022	MH	Aggregated	Aggregated	DSL	2340.17527	18526.9294	1.8103042	10.23415	189607.4227
Orange	2022	MHDT	Aggregated	Aggregated	GAS	4507.86562	192097.887	27.32495859	7.030125	1350472.245
Orange	2022	MHDT	Aggregated	Aggregated	DSL	33694.7501	1924728.22	220.0137039	8.74822	16837945.27
Orange	2022	OBUS	Aggregated	Aggregated	GAS	1659.21856	74988.5133	10.25748177	7.310616	548212.2465
Orange	2022	OBUS	Aggregated	Aggregated	DSL	839.341396	68169.0407	9.243845368	7.374533	502714.825
Orange	2022	SBUS	Aggregated	Aggregated	GAS	431.854731	15976.0929	1.397063278	11.43548	182694.3334
Orange	2022	SBUS	Aggregated	Aggregated	DSL	862.443712	32734.5114	4.512533839	7.254131	237460.432
Orange	2022	UBUS	Aggregated	Aggregated	GAS	511.789868	56190.666	11.12905041	5.049008	283707.1296
Orange	2022	UBUS	Aggregated	Aggregated	DSL	639.404008	70201.7358	13.49272812	5.202931	365254.7996
										Vehicles
										Sum of VMT*FE
										2048251309
										Total VMT
										79625584.76
										Weighted Average FE
										25.7235324 miles/gallon

Total VMT
 Source: AQ/GHG Appendix, CalEEMod Output
 Yorba Linda (Proposed) - Orange County, Annual
 Date: 10/4/2019 11:11 PM

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Baseline	Regulatory Compliance
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	1,808.45	2,365.90	2,365.90	2,070,804	2,070,804
Total	1,808.45	2,365.90	2,365.90	2,070,804	2,070,804

	Annual VMT (miles)	Fuel Consumption	
Total VMT	2,070,804	80,502	gallons per year

Operation Natural Gas Use

Source: AQ/GHG Appendix, CalEEMod Output

Yorba Linda (Proposed) - Orange County, Annual

Date: 10/4/2019 11:11 PM

kBTU/yr = kilo-British Thermal Units/year

CF = cubic feet

Fast Food Restaurant with Drive Thru	996,307 kBTU/yr
Total	996,307 kBTU/yr

Conversion from kBTU/yr to CF/yr

Abraxas. 2020. Energy Conversion Calculator.

Website: <https://www.abraxasenergy.com/energy-resources/toolbox/conversion-calculators/energy/>. Accessed April 16, 2020.

Equivalency:

996,307 kBTU/yr

976,772 CF/yr natural gas

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with	996307	5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003	0.0000	53.1668	53.1668	1.0200e-003	9.7000e-004	53.4827
Total		5.3700e-003	0.0488	0.0410	2.9000e-004		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003	0.0000	53.1668	53.1668	1.0200e-003	9.7000e-004	53.4827

Convert From:

996307

kBTU

how many decimal places? 3

Convert

To:

996307000 Btu

996307 kBTU

996.307 Million BTU

10511636634 Joules

1051163663.4 kiloJoules

1051163.663 MegaJoules

291988.689 kWh

291.989 MWh

9963.07 therm

996.307 decatherm

9767.714 natural gas CCF

976771.569 natural gas CF

Proposed Operation Electricity Use

Source: AQ/GHG Appendix, CalEEMod Output

Yorba Linda (Proposed) - Orange County, Annual

Date: 10/4/2019 11:11 PM

Project Electricity Use

kWh/yr = kilowatt hours per year

Land Use	Electricity Use (kWh/yr)
Fast Food Restaurant with Drive Thru	140,156

Total **140,156 kWh/yr**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	140156	44.6568	1.8400e- 003	3.8000e- 004	44.8165
Total		44.6568	1.8400e- 003	3.8000e- 004	44.8165

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