

THE LAKEVIEW PLAZA PROJECT ENERGY CONSERVATION ANALYSIS CITY OF LAKE ELSINORE



THE LAKEVIEW PLAZA PROJECT ENERGY CONSERVATION ANALYSIS City of Lake Elsinore, California

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1.0 Introduction

1.1 Purpose of Report and Study Objectives

The purpose of this energy conservation analysis is to review the energy implications of the proposed Lakeview Plaza Project (project) and provide recommendations to reduce wasteful, inefficient and unnecessary consumption of energy during construction and operation. This analysis has been prepared within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.).

CEQA Guidelines, Appendix F, Energy Conservation, describes the framework within which energy conservation should be analyzed. The goal of conserving energy implies the wise and efficient use of energy through decreasing overall per capita energy consumption, decreasing reliance on fossil fuels (such as coal, natural gas and oil), and increasing reliance on renewable energy sources. This analysis considers energy impacts to include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction and operation.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.

1.2 Site Location

The proposed project is located at the northwest corner of Lakeshore Drive and Manning Street, in the City of Lake Elsinore, as indicated in Exhibit A. The project site is currently vacant and is approximately 4.32 acres in size.

The project location map is provided in Exhibit A.

1.3 Project Description

The project would consist of constructing and operating of a 43,120 square feet of retail/commercial center which consist of 36,120 square feet of retail and 7,000 square feet of restaurant. An illuminated parking lot with approximately 207 parking spaces will be provided on-site. Based on the Lakeview Plaza Project Air Quality and Greenhouse Gas Emissions Study, prepared by Rincon Consultants, Inc., dated July 2020 (Air/GHG Study) Construction of the project is estimated to last approximately 14 months and consist of site preparation, grading, building construction, paving, and architectural coating.

The site plan used in this analysis was provided by AB Group Architecture Planning Development and is illustrated in Exhibit B. The proposed project land uses are shown in Table 1.

**Table 1
Land Use Summary**

| Land Use | Quantity | Metric ¹ |
|-------------|----------|---------------------|
| Retail | 36,120 | SF |
| Restaurant | 7,000 | SF |
| Parking Lot | 207 | Spaces |

¹ VFP = Vehicle Fueling Positions
SF = Square Feet

1.4 Utility Providers

The project will be served by the following utility providers, as shown in Table 2.

**Table 2
Utility Providers**

| Utility | Provider |
|-------------|---------------------------------|
| Electricity | Southern California Edison |
| Natural Gas | Southern California Gas Company |
| Water | Rancho California Water |
| Sewer | Rancho California Water |
| Telephone | Frontier Communications |
| Cable | Time Warner Cable or Spectrum |

1.5 Summary of CEQA Impacts

Table 3 provides a summary of the project’s impact to Energy resources, per the impact criteria described in CEQA Guidelines, Appendix G.

**Table 3
CEQA Energy Impact Criteria**

| Energy Impact Criteria | Potentially Significant | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|-------------------------|--|------------------------------|-----------|
| <i>Would the project:</i> | | | | |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | | | X | |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | | | X | |

1.6 Recommended Project Design Features

The following recommended project design features include standard rules and requirements, best practices and recognized design features for reducing energy demand and are consistent with the recommendations provided with Air/GHG study.

The following project energy design features are recommended:

Construction Design Features:

- DF-1.** All General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- DF-2.** Trucks having no current hauling activity shall not idle but to be turned off.
- DF-3.** In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

DF-4. In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Operational Design Features:

DF-5. Comply with the mandatory requirements of California's Building Energy Efficiency Standards and Green Building (CALGreen) Standards, including mandatory installation of electric vehicle service equipment (EVSE).

DF-6. Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.

DF-7. Use electric landscaping equipment, such as lawn mowers and leaf blowers.

2.0 Energy Setting

2.1 Background Information

There are many different types and sources of energy produced and consumed in the United States. The U.S. Energy Information Administration (EIA) categorizes energy by primary and secondary sources, renewable and nonrenewable sources, and by the different types of fossil fuels.¹

Primary energy is captured directly from natural resources and includes fossil fuels, nuclear energy, and renewable sources of energy. Electricity is a secondary energy source that results from the transformation of primary energy sources.

A renewable energy source includes solar energy from the sun, geothermal energy from heat inside the earth, wind energy, biomass from plants, and hydropower from flowing water. Nonrenewable energy sources include petroleum products, hydrocarbon gas liquids, natural gas, coal, and nuclear energy.

Fossil fuels are non-renewable resources formed by organic matter over millions of years and include oil, coal and natural gas.

The U.S. EIA defines the five energy consuming sectors within the U.S. as follows:

- **Industrial Sector:** Includes facilities and equipment used for manufacturing, agriculture, mining, and construction.
- **Transportation Sector:** Includes vehicles that transport people or goods, such as cars, trucks, buses, motorcycles, trains, aircraft, boats, barges, and ships.
- **Residential Sector:** Includes homes and apartments.
- **Commercial Sector:** Includes offices, malls, stores, schools, hospitals, hotels, warehouses, restaurants, and places of worship and public assembly.
- **Electric Power Sector:** Consumes primary energy to generate most of the electricity the other four sectors consume.

Energy sources are measured in different physical units: liquid fuels are measured in barrels or gallons, natural gas in cubic feet, coal in short tons, and electricity in kilowatts and kilowatt-hours. In the United States, British thermal units (Btu), a measure of heat energy, is commonly used for comparing different types of energy to each other.

¹ U.S. Energy Information Administration (EIA). https://www.eia.gov/energyexplained/?page=us_energy_home#tab1

**Table 4
Btu Conversion Factors¹**

| Energy source/fuel | Btu Conversion Factor² |
|---------------------------|---|
| Electricity | 1 kilowatthour = 3,412 Btu |
| Natural gas | 1 cubic foot = 1,037 Btu 1 therm = 100,000 Btu |
| Motor gasoline | 1 gallon = 120,286 Btu ³ |
| Diesel fuel | 1 gallon = 137,381 Btu ⁴ |
| Heating oil | 1 gallon = 138,500 Btu ⁵ |
| Propane | 1 gallon = 91,452 Btu |
| Wood | 1 cord = 20,000,000 Btu ⁶ |

¹ Source: <https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php>

² Btu factors are for end-use consumption in 2019 from *Monthly Energy Review*, May 2020, excluding wood; preliminary data.

³ Finished motor gasoline sold at retail in the United States, including fuel ethanol content.

⁴ Distillate fuel with 15 parts per million (ppm) sulfur or less sulfur content.

⁵ Distillate fuel with 15 ppm to 500 ppm sulfur content.

⁶ A cord of wood is a volume unit and does not take wood density or moisture content into account. Wood heat content varies significantly with moisture content.

2.2 U.S. Energy Statistics

U.S. energy production and consumption data provide context for the project within the broader domestic energy setting. Calendar year 2019 is the most current data published by the U.S. EIA. Table 5 shows the total U.S. primary energy consumption for Year 2019.

**Table 5
U.S. Primary Energy Consumption (Year 2019)¹**

| Primary Energy Source | Energy Consumption | |
|--|----------------------------------|-------------------|
| | Btu (in Quadrillions) | Percentage |
| Total Fossil Fuel Consumption | 80.39 | 80.25% |
| Petroleum (Excluding Biofuels) | 36.87 | 36.81% |
| Natural Gas (Excluding Supplemental Gaseous Fuels) | 32.20 | 32.15% |
| Coal | 11.32 | 11.30% |
| Total Renewable Energy Consumption | 11.33 | 11.31% |
| Biomass Energy | 4.92 | 4.91% |
| Hydroelectric Power | 2.56 | 2.56% |
| Wind Energy | 2.63 | 2.63% |
| Solar Energy | 1.02 | 1.02% |
| Geothermal Energy | 0.20 | 0.20% |
| Nuclear Electric Power | 8.45 | 8.44% |
| Total Primary Energy Consumption | 100.17 | 100.00% |

¹ U.S. EIA website. <https://www.eia.gov/totalenergy/data/browser/index.php?tbl=T01.03#/?f=A>

In 2019, total U.S. energy exports were greater than total energy imports, and the United States became a net total energy exporter for the first time since 1952². Also notable in year 2019, is that renewable energy production, mainly attributed to wind and solar, reached new record highs.²

Electricity is produced from many different energy sources and technologies. In 2019, the generation of electric power consumed approximately 37 percent of all energy domestically.³

Table 6 shows the amount of electricity generated by primary energy sources in the U.S. for year 2019.

Table 6
U.S. Electricity Generation, by Source (Year 2019)¹

| Energy Source | Electricity Generation | |
|---|-------------------------|---------------|
| | Thousand Megawatt-hours | Percentage |
| Natural Gas | 1,598,308 | 38.7% |
| Coal | 964,957 | 23.4% |
| Petroleum | 18,438 | 0.4% |
| Nuclear | 809,409 | 19.6% |
| Hydroelectric (Conventional, less pumped storage) | 282,613 | 6.8% |
| Solar (Utility-scale and small-scale generation) | 71,937 | 1.7% |
| Renewable Sources (Excluding hydro and solar) | 367,886 | 8.9% |
| Other | 12,591 | 0.3% |
| Total Electricity Generation (2017) | 4,126,139 | 100.0% |

¹ U.S EIA website. https://www.eia.gov/totalenergy/data/browser/index.php?tbl=T07_02A#/?f=A

2.3 California Energy Statistics

California produced about 2,408 trillion Btu of total energy in year 2018 and consumed over 7,928 trillion Btu, making it the second highest consumer of energy in the country, behind only Texas. However, due in part to its mild climate and energy efficiency programs, California ranks 48th in per capita energy consumption.⁴ Overall, California is a net importer of energy, and consumes more energy than it produces. Energy is imported into California in various forms including natural gas, crude oil and electricity.

² U.S. Energy Information Administration (EIA). https://www.eia.gov/energyexplained/index.php?page=us_energy_home

³ U.S. Energy Information Administration (EIA). https://www.eia.gov/energyexplained/?page=us_energy_home#tab1

⁴ U.S. Energy Information Administration (EIA). <https://www.eia.gov/state/?sid=CA#tabs-1>

Natural Gas is primarily imported via pipelines from Canada, the Rocky Mountains, New Mexico and Texas. Natural gas is the primary source of electricity generated in California.⁵

Crude oil is primarily imported from Alaska, Mexico, Canada, South America and the Middle East. Crude oil is refined at one of the seventeen (17) in-state oil refineries that meet California’s strict clean fuel regulations. Refined petroleum products, including gasoline, are also imported from numerous other domestic and foreign sources that are equipped to meet California’s fuel standards.⁵

Electricity is imported via transmission lines from the Northwest (Alberta, British Columbia, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming) and Southwest (Arizona, Baja California, Colorado, Mexico, Nevada, New Mexico, Texas, and Utah) regions of the U.S.⁵

Table 7 shows the State of California’s energy consumption estimates for year 2018.

**Table 7
California Energy Consumption by Source (Year 2018)¹**

| Primary Energy Source | Energy Consumption | |
|---|-----------------------|---------------|
| | Btu (in Trillions) | Percentage |
| Total Fossil Fuel Consumption | 5,717.6 | 72.1% |
| Coal | 33.3 | 0.4% |
| Natural Gas | 2,207.4 | 27.8% |
| Motor Gasoline excl. Ethanol | 1,716.3 | 21.6% |
| Distillate Fuel Oil | 552.2 | 7.0% |
| Jet Fuel | 648.8 | 8.2% |
| Hydrocarbon Gas Liquids (HGL) | 58.4 | 0.7% |
| Residual Fuel | 168.9 | 2.1% |
| Other Petroleum | 332.3 | 4.2% |
| Total Renewable Energy Consumption | 1,154.4 | 14.6% |
| Hydroelectric Power | 239.7 | 3.0% |
| Biomass | 296.9 | 3.7% |
| Solar | 381.7 | 4.8% |
| Wind | 127.7 | 1.6% |
| Geothermal | 108.4 | 1.4% |
| Nuclear Electric Power | 190.4 | 2.4% |
| Net Electricity Imports and Interstate Flow | 865.7 | 10.9% |
| Total | 7,928.1 | 100.0% |

¹ U.S CIA website. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/sum_btu_totcb.html&sid=CA

⁵ California Energy Commission. <https://www.energy.ca.gov/almanac/>

Table 8 shows the sources and fuel types for California’s system-wide generation of electricity for year 2019.

**Table 8
California Electric Generation in Gigawatt Hours (Year 2019)¹**

| Fuel Type | California In-State Generation (GWh) ² | Percent of California In-State Generation | Northwest Imports (GWh) | Southwest Imports (GWh) | Total California Energy Mix (GWh) | Total California Power Mix |
|-------------------------------------|---|---|-------------------------|-------------------------|-----------------------------------|----------------------------|
| Coal | 248 | 0.12% | 219 | 7,765 | 8,233 | 2.96% |
| Natural Gas | 86,136 | 42.97% | 62 | 8,859 | 95,057 | 34.23% |
| Oil | 36 | 0.02% | 0 | 0 | 36 | 0.01% |
| Other (Waste Heat / Petroleum Coke) | 411 | 0.20% | 0 | 11 | 422 | 0.15% |
| Nuclear | 16,163 | 8.06% | 39 | 8,743 | 24,945 | 8.98% |
| Large Hydro | 33,145 | 16.53% | 6,387 | 1,071 | 40,603 | 14.62% |
| Unspecified Renewable | 0 | 0.00% | 6,609 | 13,767 | 20,376 | 7.34% |
| Biomass | 5,851 | 2.92% | 903 | 33 | 6,787 | 2.44% |
| Geothermal | 10,943 | 5.46% | 99 | 2,218 | 13,260 | 4.77% |
| Small Hydro | 5,349 | 2.67% | 292 | 4 | 5,646 | 2.03% |
| Solar | 28,513 | 14.22% | 282 | 5,295 | 34,090 | 12.28% |
| Wind | 13,680 | 6.82% | 9,038 | 5,531 | 28,249 | 10.17% |
| Renewables Totals | 64,336 | 32.09% | 10,615 | 13,081 | 88,032 | 31.70% |
| Total | 200,475 | 100.00% | 23,930 | 53,299 | 277,704 | 100.00% |

¹ California Energy Commission. CEC-1304 Power Plant Owners Reporting Form and SB 1305 Reporting Regulations. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation>

² In-state generation is reported generation from units one megawatt and larger.

2.4 Southern California Edison

Southern California Edison (SCE) provides electricity service to approximately 180 cities in 15 counties in central, coastal and Southern California; including the project site.⁶ According to the California Energy Commission (CEC), SCE consumed approximately 80,912 GWh of electricity in 2019⁷; which is approximately 29% of the State’s total electricity usage.

⁶ Southern California Edison. <https://www.sce.com/about-us>

⁷ California Energy Commission. <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>

The CEC Power Source Disclosure program requires retail electricity suppliers to annually disclose their sources of energy for electricity. This information is provided through annual Power Content Labels.

Table 9 shows SCE’s Power Content Label for year 2019.

Table 9
Southern California Edison Electricity Generation (Year 2019)

| Energy Resource | SCE Electricity Generation | |
|---|----------------------------|------------------------|
| | GWh ¹ | Power Mix ¹ |
| Eligible Renewable | 28,400.37 | 35% |
| Biomass & Biowaste | 485.48 | 1% |
| Geothermal | 4,773.85 | 6% |
| Eligible Hydroelectric | 809.13 | 1% |
| Solar | 12,946.04 | 16% |
| Wind | 9,304.96 | 12% |
| Coal | - | 0% |
| Large Hydroelectric | 6,392.11 | 8% |
| Natural Gas | 13,026.95 | 16% |
| Nuclear | 6,634.84 | 8% |
| Other | 80.91 | 0% |
| Unspecified Sources of Power ³ | 26,377.55 | 33% |
| Total | 80,912.73 | 100% |

¹. Source: Southern California Edison. https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf

². GWh generated by energy resources estimated based on total energy consumption and power mix. California Energy Commission Electricity Consumption by Entity, SCE, Year 2019, All Sectors <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>

³. Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

2.5 Southern California Gas Company

The Southern California Gas Company (SCG) is the nation’s largest natural gas distribution utility, providing service to 21.8 million customers in 220 cities and 12 counties from Visalia to the Mexican border; including service to the project site. SCG owns and operates 3,526 miles of transmission pipelines, 49,715 miles of distribution pipelines and 48,888 miles of service lines. SCG also operates eleven transmission compressor stations and four underground storage facilities with a combined capacity to store 134.1 billion cubic feet of natural gas.⁸

Table 10 shows SCG’s natural gas usage by sector for year 2019.

Table 10
Southern California Gas Company
Natural Gas Consumption, by Sector (Year 2019)¹

| Sector | SCG Natural Gas Usage – Year 2017 | |
|--------------------------|-----------------------------------|---------------------------------|
| | (Millions of Therms) ² | (Trillions of Btu) ² |
| Agriculture & Water Pump | 72.529368 | 7.2529368 |
| Commercial Building | 947.846870 | 94.784687 |
| Commercial Other | 81.925057 | 8.1925057 |
| Industry | 1,684.430931 | 168.4430931 |
| Mining & Construction | 219.359345 | 21.9359345 |
| Residential | 2,418.619748 | 241.8619748 |
| Total Usage | 5424.711309 | 542.4711309 |

¹ Source: California Energy Commission. <http://www.ecdms.energy.ca.gov/gasbyutil.aspx>

² 1 therm = 100,000 Btu

⁸ Southern California Gas Company. <https://www.socalgas.com/about-us/company-profile>

3.0 Regulatory Setting

Energy is controlled through various federal and state laws and regulations. This section provides a brief overview of key energy legislation and policies at the federal and state levels over the past 50 years.

3.1 Federal Regulations

Table 11
U.S. Energy Policy Legislative Acts

| Date | Legislative Act and Description |
|------|--|
| 1975 | <p>Energy Policy and Conservation Act</p> <p>Established the Strategic Petroleum Reserve and mandated vehicle fuel economy standards</p> |
| 1978 | <p>National Energy Act</p> <p>Established tax incentives and disincentives, alternative fuel programs, energy efficiency initiatives, and other regulatory and market-based initiatives in response to the oil crisis earlier in the decade. Comprised of 5 statutes:</p> <p>Energy Tax Act</p> <p style="padding-left: 20px;">Created the Gas Guzzler tax for vehicles with mileage below specified levels and offered income tax credit for citizens using solar, wind, or geothermal energy sources at home</p> <p>Natural Gas Policy Act</p> <p style="padding-left: 20px;">Set up wellhead pricing maximums, rules for allocating costs of high-cost gas to industrial consumers, and provided authority to high priority users in times of supply emergency; gave FERC jurisdiction over almost all natural gas production</p> <p>National Energy Conservation Policy Act</p> <p style="padding-left: 20px;">Replaced Minimum Energy Performance Standards (MEPS) set forth in the EPCA of 1975, changed energy standards from voluntary to mandatory, Required federal agencies to do energy audits of their operations, Provided loans for families to purchase solar heating or cooling systems, and Established grants for schools, hospitals, local governments, and public housing authorities willing to use energy conservation measures</p> <p>Power Plant and Industrial Fuel Use Act</p> <p style="padding-left: 20px;">Restricted construction of power plants fueled primarily by oil or natural gas and instead encouraged power plants fueled by coal, nuclear, and alternative fuels and restricted use of oil and natural gas in industrial boilers. Repealed in 1987 with the Natural Gas Utilization Act</p> <p>Public Utility Regulatory Policies Act</p> <p style="padding-left: 20px;">Promoted use of renewable energy, encouraged cogeneration plants.</p> |
| 1980 | <p>Energy Security Act</p> <p>Title I: US Synthetic Fuels Corporation Act</p> <p style="padding-left: 20px;">Established the Synthetic Fuels Corporation (which only existed until 1985) for the purpose of partnering with industry for the creation of a market for domestically-produced synthetic liquid fuels; moved research and development for synthetic fuels away from the Department of Energy and into this public-private partnership with the hopes of speeding up results.</p> <p>Title II: Biomass Energy and Alcohol Fuels Act</p> <p style="padding-left: 20px;">Provided loan guarantees for small-scale biomass energy projects; established the Office of Alcohol Fuels, the Office of Energy from Municipal Waste.</p> |

**Table 11
U.S. Energy Policy Legislative Acts**

| Date | Legislative Act and Description |
|------|--|
| | <p>Title III: Energy Targets Required the submission of energy targets for net imports.</p> <p>Title IV: Renewable Initiatives Established incentives for the use of renewable energy resources</p> <p>Title V: Solar Energy and Energy Conservation Encouraged energy conservation and the use of solar energy, reducing dependence on foreign energy supplies.</p> <p>Title VI: Geothermal Energy Act Authorized loans from the Geothermal Resources Development Fund for exploration and determination of economic viability of a geothermal reservoir, cancels loan if reservoir is deemed unacceptable for development.</p> <p>Title VII: Acid Precipitation Program Established a task force to study the causes and risks of acid precipitation</p> <p>Title VIII: Strategic Petroleum Reserve Established that 500,000,000 barrels of crude oil must be in storage before any can be sold and calls for the reserve to increase its supply 100,000 barrels per day until the storage capacity is reached</p> |
| 1992 | <p>Energy Policy Act Amended the National Energy Conservation Policy Act of 1978. Created framework for wholesale electricity generation. Provided financial incentives to users/developers of clean-fuel vehicles; repealed alternative minimum tax for some producers. Intended to expand the use of natural gas.</p> |
| 2002 | <p>Farm Security and Rural Investment Act (Farm Bill) Included \$405 million in mandatory funding over the following 5 years for the procurement of bio-based products, grants and loans for renewable energy and energy efficiency projects, research and development and the bioenergy program. Included, for reasons of national energy and security, rural economic development, and environmental sustainability in light of climate change impacts.</p> |
| 2005 | <p>Energy Policy Act Offers tax benefits to individuals who increase energy efficiency in existing homes, buy or lease hybrid/alternative vehicles, required all public utilities to offer net metering on request, increased required amounts of renewable fuel in gasoline sold in the US, and encourages more domestic energy production</p> |
| 2007 | <p>Energy Independence and Security Act Increased CAFE standards to 35 mpg (fleet-wide for passenger autos and light trucks) by 2020; instituted new conservation measures for federal fleet vehicles; authorized increased taxpayer-funded biofuel production (36 billion gallons by 2022 - 21 billion of which must be derived from non-cornstarch products). Revised standards for appliances and lighting; all federal buildings must use Energy Star lighting products; training for green jobs; loans for small business energy efficiency improvements.</p> |
| 2008 | <p>Food, Conservation, and Energy Act (Farm Bill) Includes provisions for loan guarantees for bio-refineries, payments to support expansion of advanced biofuels, expands the existing Rural Energy for America Program, provides grant monies for biofuel and bio-based product research and development</p> |
| 2009 | <p>The American Recovery and Reinvestment Act of 2009</p> |

Table 11
U.S. Energy Policy Legislative Acts

| Date | Legislative Act and Description |
|-------------|--|
| | \$800 billion economic stimulus package aimed at job creation and the promotion of investment and consumer spending; included \$4.3 billion in tax credits to homeowners for energy efficiency improvements in 2009-2010, \$300 million for reducing diesel engine emissions, \$21.5 billion for energy infrastructure, \$27.2 billion for energy efficiency and renewable energy research and investment, \$2 billion in research for DOE, \$600 million in research for NOAA |
| 2015 | The Clean Power Plan The first comprehensive plan to reduce carbon emissions from power plants by 32% in 2030, compared to 2005 levels. Currently in the process of being repealed by the Trump administration. |

¹ Source: Robinson, Brandi. Penn State University. <https://www.e-education.psu.edu/geog432/node/116>

3.2 State of California Regulations

California has a longstanding history of support for energy conservation and renewable energy.

Table 12 provides a summary of some of the key legislative acts, policies and regulations in the State of California for encouraging energy conservation and renewable energy.

Table 12
California Energy Policy Legislative Acts and Regulations

| Date | Legislative Act and Description |
|------|---|
| 1974 | Warren-Alquist Act Established the California Energy Commission (CEC) as the state’s primary energy policy and planning agency. Responsible for preparing State Energy Plan. CEC’s goals are to reduce energy costs and environmental impacts of energy use, while ensuring a safe, resilient, and reliable supply of energy. |
| 1978 | Title 24 of the California Code of Regulations Establishes the Renewable Portfolio Standard (RPS) program, requiring 20% of retail sales from renewable energy by 2017. |
| 2002 | Senate Bill 1078 Required 20% of retail sales from renewable energy by 2017. |
| 2003 | Energy Action Plan I Accelerated the 20% renewable deadline to 2010. |
| 2005 | Energy Action Plan II Recommended further goal of 33% renewable by 2020. |
| 2006 | Senate Bill 107 Codified the accelerated 20% renewable by 2010 deadline into law. |
| 2008 | Executive Order S-14-08 Signed by Gov. Schwarzenegger, requires 33% renewables by 2020. |
| 2009 | Executive Order S-21-09 Directs the California Air Resources Board, under its AB 32 authority, to adopt regulations by July 31, 2010, consistent with the 33% renewable energy target established in Executive Order S-14-08. |
| 2011 | Senate Bill X1-2 Signed by Gov. Edmund G. Brown, Jr., codifies 33% renewable by 2020 RPS |
| 2015 | Senate Bill 350 – Clean Energy and Pollution Reduction Act of 2015 Signed by Gov. Edmund G. Brown, Jr. codifies 50% by 2030 RPS |
| 2018 | Senate Bill 100 Signed by Gov. Edmund G. Brown, Jr. codifies 60% by 2030 & 100% by 2045 RPS |

¹ Source: California Energy Commission. <https://www.energy.ca.gov/renewables/index.html>

4.0 Project Energy Consumption

4.1 Energy Consumption Methodology

The three (3) main types of energy expected to be consumed by the project include electricity, natural gas and petroleum products in the form of gasoline and diesel fuel. Energy usage for the proposed project is calculated based on the *Lakeview Plaza Project Air Quality and Greenhouse Gas Emissions Study, prepared by Rincon Consultants, Inc., dated July 2020.*

The California Emissions Estimator Model Version 2016.3.2 (CalEEMod) is used to calculate energy usage from project construction and operational activities.

The CalEEMod Annual Reports for the project are provided in Appendix A.

4.2 Electricity Consumption

The project will use electricity for many different operational activities including, but not limited to, building heating and cooling, lighting, appliances, electronics, mechanical equipment, electric vehicle charging, and parking lot lighting. Indirect electricity usage will also be required to supply, distribute, and treat water and wastewater. Electricity will be provided to the site by Southern California Edison.

Temporary electricity usage for construction activities may include lighting, electric equipment and mobile office uses, however, CalEEMod does not calculate electricity usage during construction. Electricity usage during construction is expected to be short-term and relatively minor compared to the operational demand, and therefore electricity usage during construction is not counted in this analysis.

Table 13 shows the project's estimated operational electricity consumption in kilowatt-hours per year (kWh/year) and millions of Btu per year.

**Table 13
Project Electricity Consumption**

| Land Use/Activity | Electricity Consumption ¹ | |
|--|--------------------------------------|------------------------|
| | (kWhr/yr) ² | (MBtu/yr) ² |
| High Turn Over Restaurant | 306,390.00 | 1,045.40 |
| Parking Lot | 28,980.00 | 98.88 |
| Strip Mall | 406,711.00 | 1,387.70 |
| Water Supply and Treatment | 73,121.00 | 249.49 |
| Electric Vehicle Service Equipment (EVSE) ³ | 146,614.00 | 500.25 |
| Total | 961,816.00 | 3,281.72 |

¹ Source: Lakeview Plaza Project Air Quality and GHG Emission Study, by Rincon Consultants, Inc. July 2020.

² kWhr/yr = Kilowatt Hours per Year
MBtu/yr = Million British Thermal Units per Year

³ Water supply and treatment includes indirect electricity for supply, treatment and distribution of water and wastewater

⁴ EVSE electricity estimates based on U.S. Department of Energy Costs Associated with Non-Residential Electric Vehicle Supply Equipment, November 2015, Appendix C, Electricity Consumption Examples.
https://afdc.energy.gov/files/u/publication/evse_cost_report_2015.pdf

⁵ 13 charging spaces per California Energy Code requirements, Section 5.106.5.3.

4.3 Natural Gas Consumption

The project will use natural gas for such things as building heating and cooling, cooking, kitchen appliances, and gas water heaters. Natural gas is not expected to be used during construction in any significant quantities and is not included in the overall calculation of the project's natural gas consumption.

Table 14 shows the project's estimated operational natural gas consumption in millions of Btu per year.

**Table 14
Project Natural Gas Consumption**

| Land Use/Activity | Natural Gas Consumption ¹ (MBtu/yr) ² |
|---------------------------|--|
| High Turn Over Restaurant | 1,914.08 |
| Parking Lot | - |
| Strip Mall | 80.19 |
| Total | 1,994.266 |

¹ Source: Lakeview Plaza Project Air Quality and GHG Emission Study, by Rincon Consultants, Inc. July 2020.

² MBtu/yr = Millions of British Thermal Units per Year

4.4 Petroleum Consumption

The project’s energy consumption from petroleum products is primarily associated with transportation related activities. This includes gasoline and diesel fuel usage for auto and truck trips during construction and operation and off-road equipment usage during construction.

4.4.1 Construction

Construction of the project is estimated to last approximately 14 months and consist of site preparation, grading, building construction, paving, and architectural coating phases. Construction activities will consume energy in the form of motor vehicle fuel (gasoline and diesel) for off-road construction equipment and on-road vehicle trips. Vehicle trips include workers and vendors traveling to and from the job-site. The analysis also includes 10,614 material hauling truck trips required for earthwork during grading.

Table 15 shows the project’s energy consumption for all off-road equipment during construction. For purposes of this analysis, all off-road equipment is assumed to run on diesel fuel. Table 16 shows the project’s energy consumption from on-road vehicle trips during construction.

**TABLE 15
Construction Off-Road Equipment Energy Consumption**

| Phase ¹ | Phase Duration (Days) ¹ | Equipment ¹ | Amount ¹ | Hours/Day ¹ | Horsepower (HP) ¹ | Load Factor ¹ | HP-hrs ² | Fuel Consumption Rate ³ (hp-hr/gal) | Diesel Fuel Consumption (gal.) | Diesel Fuel Consumption by Phase (gal.) | MBtu ⁴ |
|----------------------------------|------------------------------------|---------------------------|---------------------|------------------------|------------------------------|--------------------------|---------------------|--|--------------------------------|---|-------------------|
| Site Preparation | 14 | Rubber Tired Dozers | 3 | 8 | 247 | 0.40 | 33,196.8 | 18.5 | 1,794.4 | 2,663.5 | 365.920 |
| | | Tractors/Loaders/Backhoes | 4 | 8 | 97 | 0.37 | 16,078.7 | | 869.1 | | |
| Grading | 50 | Excavators | 1 | 8 | 158 | 0.38 | 24,016.0 | | 1,298.2 | 7,420.1 | 1,019.382 |
| | | Graders | 1 | 8 | 187 | 0.41 | 30,668.0 | | 1,657.7 | | |
| | | Rubber Tired Dozers | 1 | 8 | 247 | 0.40 | 39,520.0 | | 2,136.2 | | |
| | | Tractors/Loaders/Backhoes | 3 | 8 | 97 | 0.37 | 43,068.0 | | 2,328.0 | | |
| Building Construction | 230 | Cranes | 1 | 7 | 231 | 0.29 | 107,853.9 | | 5,829.9 | 28,752.5 | 3,950.045 |
| | | Forklifts | 3 | 8 | 89 | 0.20 | 98,256.0 | | 5,311.1 | | |
| | | Generator Sets | 1 | 8 | 84 | 0.74 | 114,374.4 | | 6,182.4 | | |
| | | Tractors/Loaders/Backhoes | 3 | 7 | 97 | 0.37 | 173,348.7 | | 9,370.2 | | |
| | | Welders | 1 | 8 | 46 | 0.45 | 38,088.0 | | 2,058.8 | | |
| Paving | 18 | Cement and Mortar Mixers | 2 | 6 | 9 | 0.56 | 1,088.6 | | 58.8 | 1,393.6 | 191.455 |
| | | Pavers | 1 | 8 | 130 | 0.42 | 7,862.4 | 425.0 | | | |
| | | Paving Equipment | 2 | 6 | 132 | 0.36 | 10,264.3 | 554.8 | | | |
| | | Rollers | 2 | 6 | 80 | 0.38 | 6,566.4 | 354.9 | | | |
| Architectural Coating | 18 | Air Compressors | 1 | 8 | 78 | 0.48 | 5,391.4 | 291.4 | 291.4 | 40.036 | |
| Total Energy Requirements | | | | | | | | | 40,521.2 | 5,566.839 | |

¹ Source: Source: Lakeview Plaza Project Air Quality and GHG Emission Study, by Rincon Consultants, Inc. July 2020. (CalEEMod v.2016.3.2)

² HP-hrs = Horsepower Hours.

³ Source: Carl Moyer Program Guidelines. 2017 Revisions. Table D-21. <https://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>

⁴ Mbtu = Millions of Btu; assuming 1 gallon of diesel fuel = 137,381 Btu.

**Table 16
Construction On-Road Trips Energy Consumption**

| Construction Phase ¹ | Phase Duration (Days) ¹ | Trips /Day ¹ | Trip Length ¹ | Phase VMT | Vehicle Class ¹ | Vehicle Mix ¹ | Average Fuel Economy (MPG) ² | Gasoline | | Diesel | | Total MBtu ³ | | |
|--|------------------------------------|-------------------------|--------------------------|-----------|----------------------------|--------------------------|---|-------------------------|---------------------------------------|----------------------------------|-------------------------|-------------------------|---------------------------------------|---------------------------|
| | | | | | | | | Fuel Split ² | Fuel Consumption by Veh. Class (gal.) | Fuel Consumption by Phase (gal.) | Fuel Split ² | | Fuel Consumption by Veh. Class (gal.) | Fuel Consumption by Phase |
| Worker Trips | | | | | | | | | | | | | | |
| Site Preparation | 14 | 18 | 14.7 | 3,704 | LDA | 0.50 | 28.57 | 0.9926 | 64.35 | | 0.0074 | 0.48 | 17.99 | |
| | | | | | LDT1 | 0.25 | 23.26 | 0.9991 | 39.78 | 148.74 | 0.0009 | 0.04 | | 0.58 |
| | | | | | LDT2 | 0.25 | 20.73 | 0.9986 | 44.61 | | 0.0014 | 0.06 | | |
| Grading | 50 | 15 | 14.7 | 11,025 | LDA | 0.50 | 28.57 | 0.9926 | 191.52 | | 0.0074 | 1.43 | 53.55 | |
| | | | | | LDT1 | 0.25 | 23.26 | 0.9991 | 118.39 | 442.68 | 0.0009 | 0.11 | | 1.72 |
| | | | | | LDT2 | 0.25 | 20.73 | 0.9986 | 132.77 | | 0.0014 | 0.19 | | |
| Building Construction | 230 | 49 | 14.7 | 165,669 | LDA | 0.50 | 28.57 | 0.9926 | 2,877.90 | | 0.0074 | 21.46 | 804.65 | |
| | | | | | LDT1 | 0.25 | 23.26 | 0.9991 | 1,779.02 | 6,652.06 | 0.0009 | 1.60 | | 25.85 |
| | | | | | LDT2 | 0.25 | 20.73 | 0.9986 | 1,995.14 | | 0.0014 | 2.80 | | |
| Paving | 18 | 20 | 14.7 | 5,292 | LDA | 0.50 | 28.57 | 0.9926 | 91.93 | | 0.0074 | 0.69 | 25.70 | |
| | | | | | LDT1 | 0.25 | 23.26 | 0.9991 | 56.83 | 212.49 | 0.0009 | 0.05 | | 0.83 |
| | | | | | LDT2 | 0.25 | 20.73 | 0.9986 | 63.73 | | 0.0014 | 0.09 | | |
| Architectural Coating | 18 | 10 | 14.7 | 2,646 | LDA | 0.50 | 28.57 | 0.9926 | 45.96 | | 0.0074 | 0.34 | 12.85 | |
| | | | | | LDT1 | 0.25 | 23.26 | 0.9991 | 28.41 | 106.24 | 0.0009 | 0.03 | | 0.41 |
| | | | | | LDT2 | 0.25 | 20.73 | 0.9986 | 31.87 | | 0.0014 | 0.04 | | |
| Sub-Total Worker Trips Energy Consumption | | | | | | | | Gasoline (gal.) | | Diesel (gal.) | | 29.39 | 914.75 | |
| Vendor Trips | | | | | | | | | | | | | | |
| Building Construction | 230 | 21 | 6.9 | 33,327 | MHDT | 0.50 | 8.50 | 0.1403 | 275.05 | | 0.8597 | 1,685.37 | 655.52 | |
| | | | | | HHDT | 0.50 | 5.85 | 0.0097 | 27.63 | 302.68 | 0.9903 | 2,820.83 | | 4,506.20 |
| Hauling Trips | | | | | | | | | | | | | | |
| Grading | 50 | 212 | 20.0 | 212,280 | HHDT | 1.00 | 5.85 | 0.0097 | 351.99 | 351.99 | 0.9903 | 35,935.19 | 35,935.19 | 4,979.20 |
| Total On-Road Construction Trips Energy Consumption | | | | | | | | Gasoline (gal.) | | Diesel (gal.) | | 40,470.78 | 6,549.47 | |

¹ Source: Source: Lakeview Plaza Project Air Quality and GHG Emission Study, by Rincon Consultants, Inc. July 2020. (CalEEMod v.2016.3.2)

² Source: EMFAC2014 Web Database. <https://www.arb.ca.gov/emfac/2014/>. (See Appendix B for more details.)

³ Mbtu = Millions of Btu; assuming 1 gallon of gasoline fuel = 120,429 Btu and 1 gallon of diesel fuel = 137,381 Btu

4.4.2 Operation

The project is expected to consume energy from auto and truck trips generated by the proposed land uses, as described in the Lakeview Plaza Traffic Impact Study, by TJW Engineering, Inc., dated January 2020 and the Lakeview Plaza Project Air Quality and Greenhouse Gas Emissions Study, prepared by Rincon Consultants, Inc., dated July 2020. Operational vehicle trips are associated with workers, customers and vendors/non-workers (i.e. delivery, service, maintenance vehicles, etc.) traveling to and from the site.

Table 17 shows the project’s energy consumption for all operational trips generated by the project on an annual basis.

**Table 17
Operational Trips Energy Consumption - Annual**

| Vehicle Class ¹ | Vehicle Mix ¹ | Average Fuel Economy (MPG) ² | Mitigated Annual VMT ¹ | Gasoline | | Diesel | | MBtu/yr ³ |
|--------------------------------------|--------------------------|---|-----------------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|----------------------|
| | | | | Fuel Split ² | Fuel Consumption (gal./yr) | Fuel Split ² | Fuel Consumption (gal./yr) | |
| LDA | 54.89% | 28.57 | 7,879,385 | 0.9926 | 150,250.65 | 0.0074 | 1,120.14 | 18,248.42 |
| LDT1 | 4.32% | 23.26 | | 0.9991 | 14,632.79 | 0.0009 | 13.18 | 1,764.02 |
| LDT2 | 20.07% | 20.73 | | 0.9986 | 76,180.70 | 0.0014 | 106.80 | 9,189.04 |
| MDV | 12.03% | 15.42 | | 0.9875 | 60,707.61 | 0.0125 | 768.45 | 7,416.53 |
| LHD1 | 1.61% | 14.08 | | 0.6650 | 6,003.06 | 0.3350 | 3,024.10 | 1,138.40 |
| LHD2 | 0.59% | 14.35 | | 0.5100 | 1,638.48 | 0.4900 | 1,574.22 | 413.59 |
| MHD | 2.10% | 8.50 | | 0.1403 | 2,735.60 | 0.8597 | 16,762.63 | 2,632.31 |
| HHD | 3.35% | 5.85 | | 0.0097 | 437.40 | 0.9903 | 44,655.58 | 6,187.50 |
| OBUS | 0.21% | 7.25 | | 0.4732 | 1,064.56 | 0.5268 | 1,185.14 | 291.02 |
| UBUS | 0.19% | 4.86 | | 0.3269 | 994.80 | 0.6731 | 2,048.33 | 401.20 |
| MCY | 0.48% | 35.36 | | 1.0000 | 1,073.39 | 0.0000 | 0.00 | 129.27 |
| SBUS | 0.07% | 8.10 | | 0.2133 | 146.70 | 0.7867 | 541.05 | 92.00 |
| MH | 0.09% | 7.88 | | 0.8345 | 771.85 | 0.1655 | 153.08 | 113.98 |
| Total Operational Trips Energy Usage | | | | Gasoline Consumption (gal.) | 316,637.59 | Diesel Consumption (gal.) | 71,952.70 | 48,017.28 |

¹ Source: Lakeview Plaza Project Air Quality and Greenhouse Gas Emissions Study, by Rincon Consultants dated July 2020 (CalEEMod v.2016.3.2)

² Source: EMFAC2014 Web Database. <https://www.arb.ca.gov/emfac/2014/>. (See Appendix B for more details.)

³ MBtu/yr = Millions of Btu per year; assuming 1 gallon of gasoline fuel = 120,429 Btu and 1 gallon of diesel fuel = 137,381 Btu

4.5 Total Project Energy Consumption

The project's total energy consumption is calculated in MBtu and shown in Table 18. Total project energy consumption includes electricity, natural gas and petroleum usage during construction and operation.

Table 18
Total Project Energy Consumption¹

| Activity | Total Energy Consumption (MBtu/yr)² | Energy Consumption (MBtu/yr)² |
|---------------------------------|---|---|
| Construction³ | 12,116.31 | -- |
| Off-Road Equipment | 5,566.84 | -- |
| On-Road Vehicle Trips | 6,549.47 | -- |
| Operational | -- | 53,293.26 |
| Electricity | -- | 3,281.72 |
| Natural Gas | -- | 1,994.27 |
| Petroleum | -- | 48,017.28 |

¹ See Tables 13-17 for more details.

² MBtu/yr = Millions of Btu per year

³ Construction activities are expected to last for 14 months.

5.0 Energy Impacts

5.1 Energy Impact Criteria

This analysis has been prepared within the context of the CEQA Guidelines, Appendix F, Energy Conservation, and Appendix G, Environmental Checklist Form. According to CEQA, the goal of conserving energy implies the wise and efficient use of energy through decreasing overall per capita energy consumption, decreasing reliance on fossil fuels (such as coal, natural gas and oil), and increasing reliance on renewable energy sources.

A significant environmental impact would result if the project would;

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, or;
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.2 Energy Impact – 1

Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The project's impact is considered less than significant with the inclusion of the mandatory requirements of California's Building Energy Efficiency Standards (Title 24, Part 6) and Green Building Standards (CALGreen, Title 24, Part 11). California's building energy efficiency standards are some of the strictest in the nation and the project's compliance with California's building code will ensure that wasteful, inefficient or unnecessary consumption of energy is minimized. The building standards code is designed to reduce the amount of energy needed to heat or cool a building, reduce energy usage for lighting and appliances and promote usage of energy from renewable sources.

The following recommended project design features include standard rules and requirements, best practices and recognized design features for reducing energy demand and are consistent with the recommendations provided with air quality study.

Construction Design Features:

- DF-1.** All General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- DF-2.** All Trucks having no current hauling activity shall not idle but to be turned off.
- DF-3.** Carpooling In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- DF-4.** In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Operational Design Features:

- DF-5.** Comply with the mandatory requirements of California's Building Energy Efficiency Standards and Green Building (CALGreen) Standards, including mandatory installation of electric vehicle service equipment (EVSE).
- DF-6.** Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
- DF-7.** Use electric landscaping equipment, such as lawn mowers and leaf blowers.

5.3 Energy Impact – 2

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project's impact is considered less than significant as the project will purchase electricity through Southern California Edison which is subject to the requirements of California Senate Bill 100 (SB 100). SB 100 is the most stringent and current energy

legislation in California; requiring that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all state agencies by December 31, 2045.⁹

The project will further comply with the mandatory requirements of California's Green Building and Building Energy Efficiency standards that promote renewable energy and energy efficiency.

⁹ SB-100 California Renewables Portfolio Standard Program.
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

6.0 References

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Appendices

Appendix A

CalEEMod Annual Emissions Output
(From Lakeview Plaza Project Air Quality and Greenhouse Gas Emissions Study,
dated July 2020, Prepared by Rincon Consultants, Inc.)

Lakeview Plaza - South Coast AQMD Air District, Annual

Lakeview Plaza
South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------------------|--------|----------|-------------|--------------------|------------|
| Parking Lot | 207.00 | Space | 3.00 | 82,800.00 | 0 |
| High Turnover (Sit Down Restaurant) | 7.00 | 1000sqft | 0.16 | 7,000.00 | 0 |
| Strip Mall | 36.12 | 1000sqft | 0.83 | 36,120.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 31 |
| Climate Zone | 10 | | | Operational Year | 2021 |
| 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

Lakeview Plaza - South Coast AQMD Air District, Annual

Project Characteristics - Energy Intensity Factors remain at defaults.

Land Use - Pursuant to project site plans.

Construction Phase - Site is vacant (demolition not anticipated). Site preparation and building phases expanded to account for substantial grading.

Grading - Material exported based on preliminary grading plan.

Architectural Coating - Assumed compliance with SCAQMD Rule 1113.

Vehicle Trips - Weekday and weekend trip generation rates adjusted based on rates used in Traffic Study. Pass by information also adjusted based on TIA

Area Coating - Assumed compliance with SCAQMD Rule 1113

Energy Use - Title 24 energy use reduced by 30 percent for compliance with 2019 Title 24 standards for commercial uses.

Water And Wastewater - Indoor water consumption reduced by 20 percent based on compliance with 2016 Title 24 standards.

Construction Off-road Equipment Mitigation - Assumed compliance with SCAQMD Rule 403

Mobile Land Use Mitigation - Site would provide sidewalk improvements along Lakeshore Drive and Manning Street. Project site is 0.3 mile from Riverside/Lakeshore Bus Stop.

Area Mitigation - Assumed compliance with SCAQMD Rule 1113.

Lakeview Plaza - South Coast AQMD Air District, Annual

| Table Name | Column Name | Default Value | New Value |
|-------------------------|---------------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 50.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 50.00 |
| tblArchitecturalCoating | EF_Parking | 100.00 | 50.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblAreaCoating | Area_EF_Parking | 100 | 50 |
| tblAreaMitigation | UseLowVOCPaintParkingCheck | False | True |
| tblConstructionPhase | NumDays | 8.00 | 50.00 |
| tblConstructionPhase | NumDays | 5.00 | 14.00 |
| tblEnergyUse | T24E | 12.38 | 8.67 |
| tblEnergyUse | T24E | 4.58 | 3.21 |
| tblGrading | MaterialExported | 0.00 | 84,910.00 |
| tblLandUse | LotAcreage | 1.86 | 3.00 |
| tblVehicleTrips | PB_TP | 43.00 | 20.00 |
| tblVehicleTrips | PB_TP | 15.00 | 10.00 |
| tblVehicleTrips | PR_TP | 37.00 | 60.00 |
| tblVehicleTrips | PR_TP | 45.00 | 50.00 |
| tblVehicleTrips | ST_TR | 158.37 | 112.18 |
| tblVehicleTrips | ST_TR | 42.04 | 83.28 |
| tblVehicleTrips | SU_TR | 131.84 | 112.18 |
| tblVehicleTrips | SU_TR | 20.43 | 83.28 |
| tblVehicleTrips | WD_TR | 127.15 | 112.18 |
| tblVehicleTrips | WD_TR | 44.32 | 83.28 |
| tblWater | IndoorWaterUseRate | 2,124,735.99 | 1,699,788.79 |
| tblWater | IndoorWaterUseRate | 2,675,499.48 | 2,140,399.58 |

Lakeview Plaza - South Coast AQMD Air District, Annual

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 | | | | | |
| 2020 | 0.2142 | 3.1817 | 1.5227 | 6.4200e-003 | 0.4146 | 0.0904 | 0.5050 | 0.1871 | 0.0842 | 0.2713 | 0.0000 | 606.7468 | 606.7468 | 0.0772 | 0.0000 | 608.6772 |
| 2021 | 0.2979 | 1.7010 | 1.6578 | 3.2500e-003 | 0.0572 | 0.0844 | 0.1416 | 0.0154 | 0.0793 | 0.0947 | 0.0000 | 286.6974 | 286.6974 | 0.0538 | 0.0000 | 288.0416 |
| Maximum | 0.2979 | 3.1817 | 1.6578 | 6.4200e-003 | 0.4146 | 0.0904 | 0.5050 | 0.1871 | 0.0842 | 0.2713 | 0.0000 | 606.7468 | 606.7468 | 0.0772 | 0.0000 | 608.6772 |

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 | | | | | |
| 2020 | 0.2142 | 3.1817 | 1.5227 | 6.4200e-003 | 0.2523 | 0.0904 | 0.3427 | 0.1022 | 0.0842 | 0.1863 | 0.0000 | 606.7466 | 606.7466 | 0.0772 | 0.0000 | 608.6770 |
| 2021 | 0.2979 | 1.7009 | 1.6578 | 3.2500e-003 | 0.0572 | 0.0844 | 0.1416 | 0.0154 | 0.0793 | 0.0947 | 0.0000 | 286.6972 | 286.6972 | 0.0538 | 0.0000 | 288.0413 |
| Maximum | 0.2979 | 3.1817 | 1.6578 | 6.4200e-003 | 0.2523 | 0.0904 | 0.3427 | 0.1022 | 0.0842 | 0.1863 | 0.0000 | 606.7466 | 606.7466 | 0.0772 | 0.0000 | 608.6770 |

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| | ROG | NOx | CO | SO2 | 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 | 34.40 | 0.00 | 25.10 | 41.94 | 0.00 | 23.21 | 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 | 7-1-2020 | 9-30-2020 | 2.5579 | 2.5579 |
| 2 | 10-1-2020 | 12-31-2020 | 0.7881 | 0.7881 |
| 3 | 1-1-2021 | 3-31-2021 | 0.6996 | 0.6996 |
| 4 | 4-1-2021 | 6-30-2021 | 0.7064 | 0.7064 |
| 5 | 7-1-2021 | 9-30-2021 | 0.5883 | 0.5883 |
| | | Highest | 2.5579 | 2.5579 |

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 | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |
| Energy | 0.0108 | 0.0978 | 0.0821 | 5.9000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 342.8646 | 342.8646 | 0.0118 | 3.9700e-003 | 344.3429 |
| Mobile | 0.9930 | 5.2031 | 11.1788 | 0.0380 | 2.9939 | 0.0314 | 3.0254 | 0.8023 | 0.0294 | 0.8317 | 0.0000 | 3,514.1655 | 3,514.1655 | 0.1875 | 0.0000 | 3,518.8517 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 24.6086 | 0.0000 | 24.6086 | 1.4543 | 0.0000 | 60.9668 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1.2183 | 22.2169 | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |
| Total | 1.1758 | 5.3009 | 11.2641 | 0.0386 | 2.9939 | 0.0389 | 3.0328 | 0.8023 | 0.0368 | 0.8391 | 25.8269 | 3,879.2533 | 3,905.0802 | 1.7797 | 7.1100e-003 | 3,951.6915 |

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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 | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |
| Energy | 0.0108 | 0.0978 | 0.0821 | 5.9000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 342.8646 | 342.8646 | 0.0118 | 3.9700e-003 | 344.3429 |
| Mobile | 0.9737 | 5.0578 | 10.6876 | 0.0360 | 2.8158 | 0.0298 | 2.8456 | 0.7546 | 0.0278 | 0.7824 | 0.0000 | 3,324.5630 | 3,324.5630 | 0.1795 | 0.0000 | 3,329.0507 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 24.6086 | 0.0000 | 24.6086 | 1.4543 | 0.0000 | 60.9668 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 1.2183 | 22.2169 | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |
| Total | 1.1564 | 5.1556 | 10.7729 | 0.0366 | 2.8158 | 0.0373 | 2.8530 | 0.7546 | 0.0353 | 0.7898 | 25.8269 | 3,689.6508 | 3,715.4777 | 1.7717 | 7.1100e-003 | 3,761.8905 |

| | ROG | NOx | CO | SO2 | 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 | 1.65 | 2.74 | 4.36 | 5.31 | 5.95 | 4.14 | 5.93 | 5.95 | 4.10 | 5.87 | 0.00 | 4.89 | 4.86 | 0.45 | 0.00 | 4.80 |

3.0 Construction Detail

Construction Phase

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| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Site Preparation | Site Preparation | 7/1/2020 | 7/20/2020 | 5 | 14 | |
| 2 | Grading | Grading | 7/21/2020 | 9/28/2020 | 5 | 50 | |
| 3 | Building Construction | Building Construction | 9/29/2020 | 8/16/2021 | 5 | 230 | |
| 4 | Architectural Coating | Architectural Coating | 8/4/2021 | 8/27/2021 | 5 | 18 | |
| 5 | Paving | Paving | 8/17/2021 | 9/9/2021 | 5 | 18 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 64,680; Non-Residential Outdoor: 21,560; Striped Parking Area: 4,968 (Architectural Coating – sqft)

OffRoad Equipment

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| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Paving | Cement and Mortar Mixers | 2 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 6.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 10,614.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 49.00 | 21.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 10.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 8 | 20.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

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3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1265 | 0.0000 | 0.1265 | 0.0695 | 0.0000 | 0.0695 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0285 | 0.2969 | 0.1506 | 2.7000e-004 | | 0.0154 | 0.0154 | | 0.0142 | 0.0142 | 0.0000 | 23.4015 | 23.4015 | 7.5700e-003 | 0.0000 | 23.5907 |
| Total | 0.0285 | 0.2969 | 0.1506 | 2.7000e-004 | 0.1265 | 0.0154 | 0.1418 | 0.0695 | 0.0142 | 0.0837 | 0.0000 | 23.4015 | 23.4015 | 7.5700e-003 | 0.0000 | 23.5907 |

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3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 5.6000e-004 | 4.3000e-004 | 4.7700e-003 | 1.0000e-005 | 1.3800e-003 | 1.0000e-005 | 1.3900e-003 | 3.7000e-004 | 1.0000e-005 | 3.8000e-004 | 0.0000 | 1.2445 | 1.2445 | 4.0000e-005 | 0.0000 | 1.2454 |
| Total | 5.6000e-004 | 4.3000e-004 | 4.7700e-003 | 1.0000e-005 | 1.3800e-003 | 1.0000e-005 | 1.3900e-003 | 3.7000e-004 | 1.0000e-005 | 3.8000e-004 | 0.0000 | 1.2445 | 1.2445 | 4.0000e-005 | 0.0000 | 1.2454 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0569 | 0.0000 | 0.0569 | 0.0313 | 0.0000 | 0.0313 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0285 | 0.2969 | 0.1506 | 2.7000e-004 | | 0.0154 | 0.0154 | | 0.0142 | 0.0142 | 0.0000 | 23.4015 | 23.4015 | 7.5700e-003 | 0.0000 | 23.5907 |
| Total | 0.0285 | 0.2969 | 0.1506 | 2.7000e-004 | 0.0569 | 0.0154 | 0.0723 | 0.0313 | 0.0142 | 0.0454 | 0.0000 | 23.4015 | 23.4015 | 7.5700e-003 | 0.0000 | 23.5907 |

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3.2 Site Preparation - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 5.6000e-004 | 4.3000e-004 | 4.7700e-003 | 1.0000e-005 | 1.3800e-003 | 1.0000e-005 | 1.3900e-003 | 3.7000e-004 | 1.0000e-005 | 3.8000e-004 | 0.0000 | 1.2445 | 1.2445 | 4.0000e-005 | 0.0000 | 1.2454 |
| Total | 5.6000e-004 | 4.3000e-004 | 4.7700e-003 | 1.0000e-005 | 1.3800e-003 | 1.0000e-005 | 1.3900e-003 | 3.7000e-004 | 1.0000e-005 | 3.8000e-004 | 0.0000 | 1.2445 | 1.2445 | 4.0000e-005 | 0.0000 | 1.2454 |

3.3 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1686 | 0.0000 | 0.1686 | 0.0849 | 0.0000 | 0.0849 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0607 | 0.6597 | 0.4013 | 7.4000e-004 | | 0.0318 | 0.0318 | | 0.0293 | 0.0293 | 0.0000 | 65.1469 | 65.1469 | 0.0211 | 0.0000 | 65.6736 |
| Total | 0.0607 | 0.6597 | 0.4013 | 7.4000e-004 | 0.1686 | 0.0318 | 0.2005 | 0.0849 | 0.0293 | 0.1142 | 0.0000 | 65.1469 | 65.1469 | 0.0211 | 0.0000 | 65.6736 |

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3.3 Grading - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0408 | 1.4892 | 0.2970 | 4.0800e-003 | 0.0913 | 4.6900e-003 | 0.0959 | 0.0251 | 4.4800e-003 | 0.0295 | 0.0000 | 400.4874 | 400.4874 | 0.0276 | 0.0000 | 401.1773 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6700e-003 | 1.2800e-003 | 0.0142 | 4.0000e-005 | 4.1100e-003 | 3.0000e-005 | 4.1500e-003 | 1.0900e-003 | 3.0000e-005 | 1.1200e-003 | 0.0000 | 3.7038 | 3.7038 | 1.1000e-004 | 0.0000 | 3.7064 |
| Total | 0.0425 | 1.4905 | 0.3112 | 4.1200e-003 | 0.0954 | 4.7200e-003 | 0.1001 | 0.0261 | 4.5100e-003 | 0.0307 | 0.0000 | 404.1912 | 404.1912 | 0.0277 | 0.0000 | 404.8837 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0759 | 0.0000 | 0.0759 | 0.0382 | 0.0000 | 0.0382 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0607 | 0.6597 | 0.4013 | 7.4000e-004 | | 0.0318 | 0.0318 | | 0.0293 | 0.0293 | 0.0000 | 65.1468 | 65.1468 | 0.0211 | 0.0000 | 65.6735 |
| Total | 0.0607 | 0.6597 | 0.4013 | 7.4000e-004 | 0.0759 | 0.0318 | 0.1077 | 0.0382 | 0.0293 | 0.0675 | 0.0000 | 65.1468 | 65.1468 | 0.0211 | 0.0000 | 65.6735 |

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3.3 Grading - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0408 | 1.4892 | 0.2970 | 4.0800e-003 | 0.0913 | 4.6900e-003 | 0.0959 | 0.0251 | 4.4800e-003 | 0.0295 | 0.0000 | 400.4874 | 400.4874 | 0.0276 | 0.0000 | 401.1773 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.6700e-003 | 1.2800e-003 | 0.0142 | 4.0000e-005 | 4.1100e-003 | 3.0000e-005 | 4.1500e-003 | 1.0900e-003 | 3.0000e-005 | 1.1200e-003 | 0.0000 | 3.7038 | 3.7038 | 1.1000e-004 | 0.0000 | 3.7064 |
| Total | 0.0425 | 1.4905 | 0.3112 | 4.1200e-003 | 0.0954 | 4.7200e-003 | 0.1001 | 0.0261 | 4.5100e-003 | 0.0307 | 0.0000 | 404.1912 | 404.1912 | 0.0277 | 0.0000 | 404.8837 |

3.4 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0721 | 0.6523 | 0.5729 | 9.2000e-004 | | 0.0380 | 0.0380 | | 0.0357 | 0.0357 | 0.0000 | 78.7474 | 78.7474 | 0.0192 | 0.0000 | 79.2277 |
| Total | 0.0721 | 0.6523 | 0.5729 | 9.2000e-004 | | 0.0380 | 0.0380 | | 0.0357 | 0.0357 | 0.0000 | 78.7474 | 78.7474 | 0.0192 | 0.0000 | 79.2277 |

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3.4 Building Construction - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3900e-003 | 0.0762 | 0.0189 | 1.8000e-004 | 4.5000e-003 | 3.7000e-004 | 4.8700e-003 | 1.3000e-003 | 3.6000e-004 | 1.6600e-003 | 0.0000 | 17.5610 | 17.5610 | 1.1500e-003 | 0.0000 | 17.5898 |
| Worker | 7.4400e-003 | 5.7000e-003 | 0.0631 | 1.8000e-004 | 0.0183 | 1.4000e-004 | 0.0184 | 4.8500e-003 | 1.3000e-004 | 4.9800e-003 | 0.0000 | 16.4545 | 16.4545 | 4.7000e-004 | 0.0000 | 16.4663 |
| Total | 9.8300e-003 | 0.0819 | 0.0820 | 3.6000e-004 | 0.0228 | 5.1000e-004 | 0.0233 | 6.1500e-003 | 4.9000e-004 | 6.6400e-003 | 0.0000 | 34.0155 | 34.0155 | 1.6200e-003 | 0.0000 | 34.0561 |

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 | 0.0721 | 0.6523 | 0.5729 | 9.2000e-004 | | 0.0380 | 0.0380 | | 0.0357 | 0.0357 | 0.0000 | 78.7473 | 78.7473 | 0.0192 | 0.0000 | 79.2276 |
| Total | 0.0721 | 0.6523 | 0.5729 | 9.2000e-004 | | 0.0380 | 0.0380 | | 0.0357 | 0.0357 | 0.0000 | 78.7473 | 78.7473 | 0.0192 | 0.0000 | 79.2276 |

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3.4 Building Construction - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3900e-003 | 0.0762 | 0.0189 | 1.8000e-004 | 4.5000e-003 | 3.7000e-004 | 4.8700e-003 | 1.3000e-003 | 3.6000e-004 | 1.6600e-003 | 0.0000 | 17.5610 | 17.5610 | 1.1500e-003 | 0.0000 | 17.5898 |
| Worker | 7.4400e-003 | 5.7000e-003 | 0.0631 | 1.8000e-004 | 0.0183 | 1.4000e-004 | 0.0184 | 4.8500e-003 | 1.3000e-004 | 4.9800e-003 | 0.0000 | 16.4545 | 16.4545 | 4.7000e-004 | 0.0000 | 16.4663 |
| Total | 9.8300e-003 | 0.0819 | 0.0820 | 3.6000e-004 | 0.0228 | 5.1000e-004 | 0.0233 | 6.1500e-003 | 4.9000e-004 | 6.6400e-003 | 0.0000 | 34.0155 | 34.0155 | 1.6200e-003 | 0.0000 | 34.0561 |

3.4 Building Construction - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1540 | 1.4120 | 1.3426 | 2.1800e-003 | | 0.0777 | 0.0777 | | 0.0730 | 0.0730 | 0.0000 | 187.6262 | 187.6262 | 0.0453 | 0.0000 | 188.7578 |
| Total | 0.1540 | 1.4120 | 1.3426 | 2.1800e-003 | | 0.0777 | 0.0777 | | 0.0730 | 0.0730 | 0.0000 | 187.6262 | 187.6262 | 0.0453 | 0.0000 | 188.7578 |

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3.4 Building Construction - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.8400e-003 | 0.1646 | 0.0408 | 4.3000e-004 | 0.0107 | 3.3000e-004 | 0.0111 | 3.0900e-003 | 3.2000e-004 | 3.4100e-003 | 0.0000 | 41.5293 | 41.5293 | 2.6300e-003 | 0.0000 | 41.5950 |
| Worker | 0.0165 | 0.0122 | 0.1383 | 4.2000e-004 | 0.0436 | 3.3000e-004 | 0.0439 | 0.0116 | 3.0000e-004 | 0.0119 | 0.0000 | 37.9302 | 37.9302 | 1.0200e-003 | 0.0000 | 37.9556 |
| Total | 0.0214 | 0.1768 | 0.1791 | 8.5000e-004 | 0.0543 | 6.6000e-004 | 0.0549 | 0.0147 | 6.2000e-004 | 0.0153 | 0.0000 | 79.4595 | 79.4595 | 3.6500e-003 | 0.0000 | 79.5506 |

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 | 0.1540 | 1.4120 | 1.3426 | 2.1800e-003 | | 0.0777 | 0.0777 | | 0.0730 | 0.0730 | 0.0000 | 187.6260 | 187.6260 | 0.0453 | 0.0000 | 188.7576 |
| Total | 0.1540 | 1.4120 | 1.3426 | 2.1800e-003 | | 0.0777 | 0.0777 | | 0.0730 | 0.0730 | 0.0000 | 187.6260 | 187.6260 | 0.0453 | 0.0000 | 188.7576 |

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3.4 Building Construction - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.8400e-003 | 0.1646 | 0.0408 | 4.3000e-004 | 0.0107 | 3.3000e-004 | 0.0111 | 3.0900e-003 | 3.2000e-004 | 3.4100e-003 | 0.0000 | 41.5293 | 41.5293 | 2.6300e-003 | 0.0000 | 41.5950 |
| Worker | 0.0165 | 0.0122 | 0.1383 | 4.2000e-004 | 0.0436 | 3.3000e-004 | 0.0439 | 0.0116 | 3.0000e-004 | 0.0119 | 0.0000 | 37.9302 | 37.9302 | 1.0200e-003 | 0.0000 | 37.9556 |
| Total | 0.0214 | 0.1768 | 0.1791 | 8.5000e-004 | 0.0543 | 6.6000e-004 | 0.0549 | 0.0147 | 6.2000e-004 | 0.0153 | 0.0000 | 79.4595 | 79.4595 | 3.6500e-003 | 0.0000 | 79.5506 |

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 | 0.1057 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 1.9700e-003 | 0.0137 | 0.0164 | 3.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 2.2979 | 2.2979 | 1.6000e-004 | 0.0000 | 2.3019 |
| Total | 0.1077 | 0.0137 | 0.0164 | 3.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 2.2979 | 2.2979 | 1.6000e-004 | 0.0000 | 2.3019 |

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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 | 3.8000e-004 | 2.8000e-004 | 3.1400e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8601 | 0.8601 | 2.0000e-005 | 0.0000 | 0.8607 |
| Total | 3.8000e-004 | 2.8000e-004 | 3.1400e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8601 | 0.8601 | 2.0000e-005 | 0.0000 | 0.8607 |

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 | 0.1057 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 1.9700e-003 | 0.0137 | 0.0164 | 3.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 2.2979 | 2.2979 | 1.6000e-004 | 0.0000 | 2.3019 |
| Total | 0.1077 | 0.0137 | 0.0164 | 3.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 2.2979 | 2.2979 | 1.6000e-004 | 0.0000 | 2.3019 |

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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 | 3.8000e-004 | 2.8000e-004 | 3.1400e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8601 | 0.8601 | 2.0000e-005 | 0.0000 | 0.8607 |
| Total | 3.8000e-004 | 2.8000e-004 | 3.1400e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.8601 | 0.8601 | 2.0000e-005 | 0.0000 | 0.8607 |

3.6 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 | 9.8500e-003 | 0.0976 | 0.1103 | 1.7000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8100e-003 | 4.8100e-003 | 0.0000 | 14.7336 | 14.7336 | 4.6300e-003 | 0.0000 | 14.8493 |
| Paving | 3.9300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0138 | 0.0976 | 0.1103 | 1.7000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8100e-003 | 4.8100e-003 | 0.0000 | 14.7336 | 14.7336 | 4.6300e-003 | 0.0000 | 14.8493 |

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3.6 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 | 7.5000e-004 | 5.5000e-004 | 6.2700e-003 | 2.0000e-005 | 1.9700e-003 | 1.0000e-005 | 1.9900e-003 | 5.2000e-004 | 1.0000e-005 | 5.4000e-004 | 0.0000 | 1.7202 | 1.7202 | 5.0000e-005 | 0.0000 | 1.7213 |
| Total | 7.5000e-004 | 5.5000e-004 | 6.2700e-003 | 2.0000e-005 | 1.9700e-003 | 1.0000e-005 | 1.9900e-003 | 5.2000e-004 | 1.0000e-005 | 5.4000e-004 | 0.0000 | 1.7202 | 1.7202 | 5.0000e-005 | 0.0000 | 1.7213 |

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 | 9.8500e-003 | 0.0976 | 0.1103 | 1.7000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8100e-003 | 4.8100e-003 | 0.0000 | 14.7335 | 14.7335 | 4.6300e-003 | 0.0000 | 14.8493 |
| Paving | 3.9300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0138 | 0.0976 | 0.1103 | 1.7000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8100e-003 | 4.8100e-003 | 0.0000 | 14.7335 | 14.7335 | 4.6300e-003 | 0.0000 | 14.8493 |

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3.6 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 | 7.5000e-004 | 5.5000e-004 | 6.2700e-003 | 2.0000e-005 | 1.9700e-003 | 1.0000e-005 | 1.9900e-003 | 5.2000e-004 | 1.0000e-005 | 5.4000e-004 | 0.0000 | 1.7202 | 1.7202 | 5.0000e-005 | 0.0000 | 1.7213 |
| Total | 7.5000e-004 | 5.5000e-004 | 6.2700e-003 | 2.0000e-005 | 1.9700e-003 | 1.0000e-005 | 1.9900e-003 | 5.2000e-004 | 1.0000e-005 | 5.4000e-004 | 0.0000 | 1.7202 | 1.7202 | 5.0000e-005 | 0.0000 | 1.7213 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

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| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.9737 | 5.0578 | 10.6876 | 0.0360 | 2.8158 | 0.0298 | 2.8456 | 0.7546 | 0.0278 | 0.7824 | 0.0000 | 3,324.5630 | 3,324.5630 | 0.1795 | 0.0000 | 3,329.0507 |
| Unmitigated | 0.9930 | 5.2031 | 11.1788 | 0.0380 | 2.9939 | 0.0314 | 3.0254 | 0.8023 | 0.0294 | 0.8317 | 0.0000 | 3,514.1655 | 3,514.1655 | 0.1875 | 0.0000 | 3,518.8517 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|-------------------------------------|-------------------------|----------|----------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| High Turnover (Sit Down Restaurant) | 785.26 | 785.26 | 785.26 | 1,642,920 | 1,545,167 |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 3,008.07 | 3,008.07 | 3,008.07 | 6,236,465 | 5,865,395 |
| Total | 3,793.33 | 3,793.33 | 3,793.33 | 7,879,385 | 7,410,562 |

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 |
| High Turnover (Sit Down) | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 60 | 20 | 20 |
| Parking Lot | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| Strip Mall | 16.60 | 8.40 | 6.90 | 16.60 | 64.40 | 19.00 | 50 | 40 | 10 |

4.4 Fleet Mix

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| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| High Turnover (Sit Down Restaurant) | 0.548858 | 0.043235 | 0.200706 | 0.120309 | 0.016131 | 0.005851 | 0.021034 | 0.033479 | 0.002070 | 0.001877 | 0.004817 | 0.000707 | 0.000925 |
| Parking Lot | 0.548858 | 0.043235 | 0.200706 | 0.120309 | 0.016131 | 0.005851 | 0.021034 | 0.033479 | 0.002070 | 0.001877 | 0.004817 | 0.000707 | 0.000925 |
| Strip Mall | 0.548858 | 0.043235 | 0.200706 | 0.120309 | 0.016131 | 0.005851 | 0.021034 | 0.033479 | 0.002070 | 0.001877 | 0.004817 | 0.000707 | 0.000925 |

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 Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 236.4430 | 236.4430 | 9.7600e-003 | 2.0200e-003 | 237.2889 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 236.4430 | 236.4430 | 9.7600e-003 | 2.0200e-003 | 237.2889 |
| NaturalGas Mitigated | 0.0108 | 0.0978 | 0.0821 | 5.9000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 106.4217 | 106.4217 | 2.0400e-003 | 1.9500e-003 | 107.0541 |
| NaturalGas Unmitigated | 0.0108 | 0.0978 | 0.0821 | 5.9000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 106.4217 | 106.4217 | 2.0400e-003 | 1.9500e-003 | 107.0541 |

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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 | | | | | |
| High Turnover (Sit Down Restaurant) | 1.91408e+006 | 0.0103 | 0.0938 | 0.0788 | 5.6000e-004 | | 7.1300e-003 | 7.1300e-003 | | 7.1300e-003 | 7.1300e-003 | 0.0000 | 102.1426 | 102.1426 | 1.9600e-003 | 1.8700e-003 | 102.7496 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 80186.4 | 4.3000e-004 | 3.9300e-003 | 3.3000e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2791 | 4.2791 | 8.0000e-005 | 8.0000e-005 | 4.3045 |
| Total | | 0.0108 | 0.0978 | 0.0821 | 5.8000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 106.4217 | 106.4217 | 2.0400e-003 | 1.9500e-003 | 107.0541 |

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 | | | | | |
| High Turnover (Sit Down Restaurant) | 1.91408e+006 | 0.0103 | 0.0938 | 0.0788 | 5.6000e-004 | | 7.1300e-003 | 7.1300e-003 | | 7.1300e-003 | 7.1300e-003 | 0.0000 | 102.1426 | 102.1426 | 1.9600e-003 | 1.8700e-003 | 102.7496 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 80186.4 | 4.3000e-004 | 3.9300e-003 | 3.3000e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2791 | 4.2791 | 8.0000e-005 | 8.0000e-005 | 4.3045 |
| Total | | 0.0108 | 0.0978 | 0.0821 | 5.8000e-004 | | 7.4300e-003 | 7.4300e-003 | | 7.4300e-003 | 7.4300e-003 | 0.0000 | 106.4217 | 106.4217 | 2.0400e-003 | 1.9500e-003 | 107.0541 |

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5.3 Energy by Land Use - Electricity

Unmitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use | kWh/yr | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 306390 | 97.6224 | 4.0300e-003 | 8.3000e-004 | 97.9717 |
| Parking Lot | 28980 | 9.2337 | 3.8000e-004 | 8.0000e-005 | 9.2667 |
| Strip Mall | 406711 | 129.5869 | 5.3500e-003 | 1.1100e-003 | 130.0505 |
| Total | | 236.4430 | 9.7600e-003 | 2.0200e-003 | 237.2889 |

Mitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use | kWh/yr | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 306390 | 97.6224 | 4.0300e-003 | 8.3000e-004 | 97.9717 |
| Parking Lot | 28980 | 9.2337 | 3.8000e-004 | 8.0000e-005 | 9.2667 |
| Strip Mall | 406711 | 129.5869 | 5.3500e-003 | 1.1100e-003 | 130.0505 |
| Total | | 236.4430 | 9.7600e-003 | 2.0200e-003 | 237.2889 |

6.0 Area Detail

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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

| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |
| Unmitigated | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |

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6.2 Area by SubCategory

Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0106 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1612 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 3.0000e-004 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |
| Total | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0106 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1612 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 3.0000e-004 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |
| Total | 0.1720 | 3.0000e-005 | 3.2000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 6.2100e-003 | 6.2100e-003 | 2.0000e-005 | 0.0000 | 6.6200e-003 |

7.0 Water Detail

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7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|-------------|---------|
| Category | MT/yr | | | |
| Mitigated | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |
| Unmitigated | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |

7.2 Water by Land Use

Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|--------------------|----------------|---------------|--------------------|----------------|
| Land Use | Mgal | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 1.69979 / 0.135621 | 8.0714 | 0.0557 | 1.3700e-003 | 9.8728 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 2.1404 / 1.63982 | 15.3639 | 0.0704 | 1.7700e-003 | 17.6508 |
| Total | | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |

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7.2 Water by Land Use

Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|--------------------|----------------|---------------|--------------------|----------------|
| Land Use | Mgal | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 1.69979 / 0.135621 | 8.0714 | 0.0557 | 1.3700e-003 | 9.8728 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 2.1404 / 1.63982 | 15.3639 | 0.0704 | 1.7700e-003 | 17.6508 |
| Total | | 23.4352 | 0.1261 | 3.1400e-003 | 27.5235 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|---------|
| | MT/yr | | | |
| Mitigated | 24.6086 | 1.4543 | 0.0000 | 60.9668 |
| Unmitigated | 24.6086 | 1.4543 | 0.0000 | 60.9668 |

8.2 Waste by Land Use

Unmitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use | tons | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 83.3 | 16.9092 | 0.9993 | 0.0000 | 41.8917 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 37.93 | 7.6995 | 0.4550 | 0.0000 | 19.0751 |
| Total | | 24.6086 | 1.4543 | 0.0000 | 60.9668 |

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8.2 Waste by Land Use

Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use | tons | MT/yr | | | |
| High Turnover (Sit Down Restaurant) | 83.3 | 16.9092 | 0.9993 | 0.0000 | 41.8917 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 37.93 | 7.6995 | 0.4550 | 0.0000 | 19.0751 |
| Total | | 24.6086 | 1.4543 | 0.0000 | 60.9668 |

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

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11.0 Vegetation

Appendix B

EMFAC2014 Vehicle Consumption Data

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: Air District

Region: South Coast AQMD

Calendar Year: 2020

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

| Region | CalYr | VehClass | MdlYr | Speed | Fuel | Population | VMT | Fuel_Consumption | Fuel Split (Gas:Diesel) | MPG, by Fuel Type | MPG, Average |
|------------------|-------|----------|------------|------------|------|-------------|-------------|------------------|----------------------------|----------------------|-----------------|
| South Coast AQMD | 2020 | LDA | Aggregated | Aggregated | GAS | 6241441.311 | 215630250.8 | 7791.379047 | 99.26% | 27.68 | 28.57 |
| South Coast AQMD | 2020 | LDA | Aggregated | Aggregated | DSL | 58578.66528 | 2170199.073 | 58.44052993 | 0.74% | 37.14 | |
| South Coast AQMD | 2020 | LDA | Aggregated | Aggregated | ELEC | 139480.2104 | 6499653.924 | 0 | | | |
| South Coast AQMD | 2020 | LDT1 | Aggregated | Aggregated | GAS | 529468.9231 | 17839921.58 | 767.6565063 | 99.91% | 23.24 | 23.26 |
| South Coast AQMD | 2020 | LDT1 | Aggregated | Aggregated | DSL | 653.8523923 | 17424.66748 | 0.656771586 | 0.09% | 26.53 | |
| South Coast AQMD | 2020 | LDT1 | Aggregated | Aggregated | ELEC | 394.8926991 | 12300.5894 | 0 | | | |
| South Coast AQMD | 2020 | LDT2 | Aggregated | Aggregated | GAS | 2196840.435 | 81691950.79 | 3942.87661 | 99.86% | 20.72 | 20.73 |
| South Coast AQMD | 2020 | LDT2 | Aggregated | Aggregated | DSL | 3707.582469 | 150823.0049 | 5.330165365 | 0.14% | 28.30 | |
| South Coast AQMD | 2020 | MDV | Aggregated | Aggregated | GAS | 1480427.171 | 49182321.35 | 3206.973029 | 98.75% | 15.34 | 15.42 |
| South Coast AQMD | 2020 | MDV | Aggregated | Aggregated | DSL | 22607.57726 | 887377.5364 | 40.62845112 | 1.25% | 21.84 | |
| South Coast AQMD | 2020 | LHDT1 | Aggregated | Aggregated | GAS | 122811.721 | 3538562.329 | 324.3272067 | 66.50% | 10.91 | 14.08 |
| South Coast AQMD | 2020 | LHDT1 | Aggregated | Aggregated | DSL | 93218.10849 | 3329186.678 | 163.383972 | 33.50% | 20.38 | |
| South Coast AQMD | 2020 | LHDT2 | Aggregated | Aggregated | GAS | 25139.08857 | 867472.8869 | 85.31303659 | 51.00% | 10.17 | 14.35 |
| South Coast AQMD | 2020 | LHDT2 | Aggregated | Aggregated | DSL | 39016.92297 | 1532624.982 | 81.98131358 | 49.00% | 18.69 | |
| South Coast AQMD | 2020 | MHDT | Aggregated | Aggregated | GAS | 19760.80313 | 980184.6784 | 139.5109867 | 14.03% | 7.03 | 8.50 |
| South Coast AQMD | 2020 | MHDT | Aggregated | Aggregated | DSL | 134726.0007 | 7469482.082 | 854.6440674 | 85.97% | 8.74 | |
| South Coast AQMD | 2020 | HHDT | Aggregated | Aggregated | GAS | 802.1440496 | 104174.0551 | 22.12472978 | 0.97% | 4.71 | 5.85 |
| South Coast AQMD | 2020 | HHDT | Aggregated | Aggregated | DSL | 94066.79161 | 13265170 | 2263.379935 | 99.03% | 5.86 | |
| South Coast AQMD | 2020 | OBUS | Aggregated | Aggregated | GAS | 8436.227028 | 392438.6707 | 54.40171127 | 47.32% | 7.21 | 7.25 |
| South Coast AQMD | 2020 | OBUS | Aggregated | Aggregated | DSL | 5358.43226 | 441411.1364 | 60.5737995 | 52.68% | 7.29 | |
| South Coast AQMD | 2020 | UBUS | Aggregated | Aggregated | GAS | 2327.880438 | 267944.8976 | 53.57098395 | 32.69% | 5.00 | 4.86 |
| South Coast AQMD | 2020 | UBUS | Aggregated | Aggregated | DSL | 4588.150023 | 527953.961 | 110.2967884 | 67.31% | 4.79 | |
| South Coast AQMD | 2020 | SBUS | Aggregated | Aggregated | GAS | 2258.46776 | 86380.44602 | 7.601539992 | 21.33% | 11.36 | 8.10 |
| South Coast AQMD | 2020 | SBUS | Aggregated | Aggregated | DSL | 5309.122191 | 202336.044 | 28.02826434 | 78.67% | 7.22 | |
| South Coast AQMD | 2020 | MCY | Aggregated | Aggregated | GAS | 289961.5795 | 1955845.416 | 55.31831514 | 100.00% | 35.36 | 35.36 |
| South Coast AQMD | 2020 | MH | Aggregated | Aggregated | GAS | 37922.10127 | 307217.3044 | 41.47456076 | 83.45% | 7.41 | 7.88 |
| South Coast AQMD | 2020 | MH | Aggregated | Aggregated | DSL | 9968.340503 | 84286.45216 | 8.223037177 | 16.55% | 10.25 | |