APPENDIX D
GREENHOUSE GAS ANALYSIS

Greenhouse Gas Analysis

for the

Chick-fil-A Carlsbad Project

Submitted To:

Eilar Associates
210 S. Juniper Street, Suite 100
Escondido, CA 92025

Prepared By:

Scientific Resources Associated
1328 Kaimalino Lane
San Diego, CA 92109
(858) 488-2987

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1.0 INTRODUCTION

The project is proposing to construct a 3,427-square foot Chick-fil-A restaurant on a site at 5850 Avenida Encinas in the City of Carlsbad. The project site is located near the intersection of Interstate 5 and Palomar Airport Road. The site is currently occupied by a 10,977-square foot office building. The office building will be demolished and replaced by the restaurant as part of the project. Figure 1 presents the proposed plot plan for the project.

Greenhouse gas (GHG) impacts will be attributable to emissions associated with construction and operational emissions associated with traffic; energy use; water use, transport, and treatment; area sources; and solid waste handling. This report presents an evaluation of existing conditions at the site, thresholds of significance, and potential GHG impacts associated with construction and operation of the project.

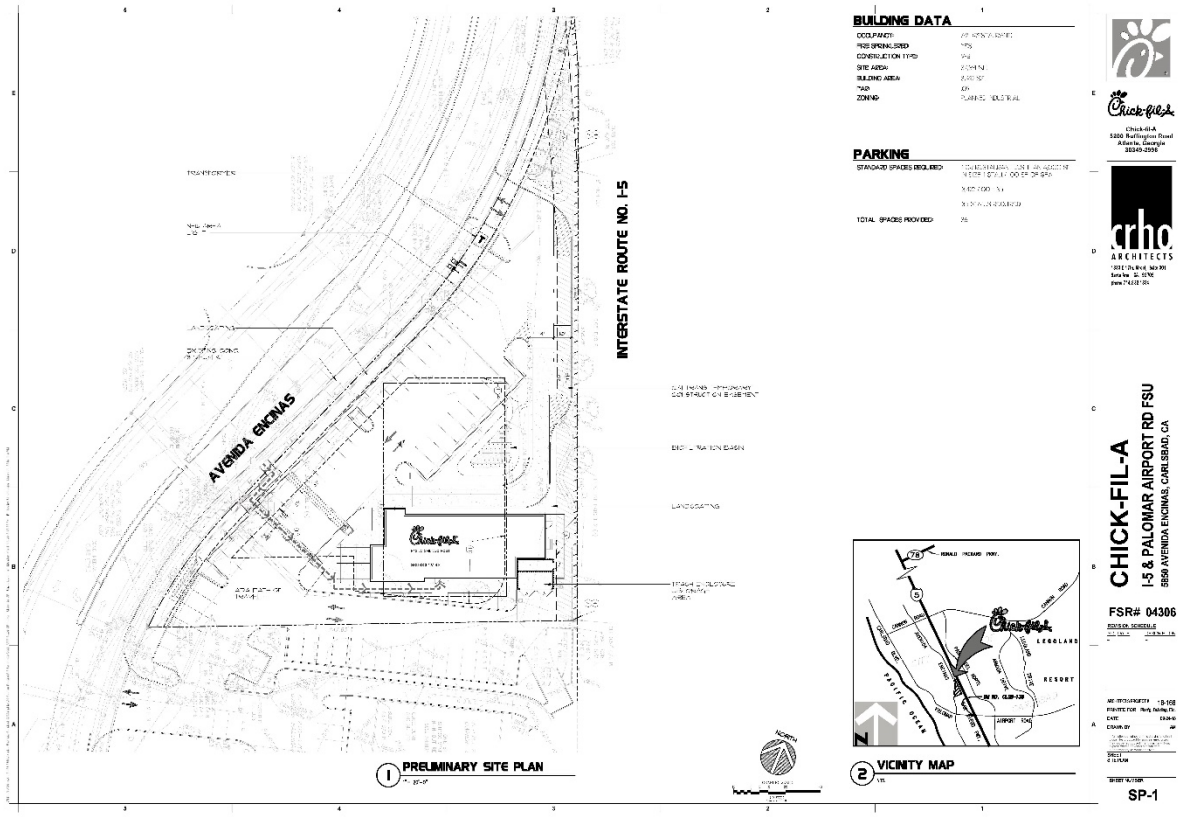

Figure 1. Preliminary Site Plan – Chick-fil-A Carlsbad

2.0 ENVIRONMENTAL SETTING

2.1 Global Climate Change

Global climate change (GCC) refers to changes in average climatic conditions on the Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global climate change may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land. Human-caused emissions of GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect[1] and have led to a trend of unnatural warming of Earth's climate, known as (GCC) or global warming.

California law defines GHGs as any of the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and sulfur hexafluoride (NF_3) (Health & Safety Code, §38505(g)). CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity.

Climate change is a global problem; and, GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern.

2.2 Greenhouse Gases

The California Air Resources Board (ARB) annually prepares a GHG inventory that identifies and quantifies statewide anthropogenic GHG emissions and sinks. The current inventory covers the years 1990 to 2017, and is summarized in Table 1, State of California GHG Emissions by Sector. The inventory is divided into nine broad sectors and categories: Agriculture, Commercial, Electricity Generation, Forestry, Industrial, Residential, Transportation, Solvents and Chemicals, and Forestry Sinks.

[1] GHGs allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

GHGs have varying global warming potentials (GWP) (i.e., the potential of a gas or aerosol to trap heat in the atmosphere). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include CH_4, which has a GWP of 25, and N_2O, which has a GWP of 298. (The GWP values used in this section are sourced to the Fourth Assessment Report (2007) of the Intergovernmental Panel on Climate Change.) When accounting for GHGs, emissions are expressed in terms of CO_2 equivalents (CO_2e), are typically quantified in metric tons (MT) or millions of metric tons (MMT), and are shown as MT CO_2e.

Human-caused sources of CO_2 include combustion of fossil fuels (e.g., coal, oil, natural gas, gasoline). CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of methane include landfills, fermentation of manure, and cattle farming. Human-caused sources of N_2O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses.

Table 1
STATE OF CALIFORNIA GHG EMISSIONS BY SECTOR

Sector	Total 1990 Emissions ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2017 Emissions ($MMTCO_2e$)	Percent of Total 2017 Emissions
Agriculture	23.4	5%	32.42	8%
Commercial	14.4	3%	15.14	4%
Electricity Generation	110.6	26%	62.39	15%
Forestry (excluding sinks)	0.2	<1%	N/A	N/A
Industrial	103.0	24%	89.40	21%
Residential	29.7	7%	26.00	6%
Transportation	150.7	35%	169.86	40%
High-GWP Gases	N/A	N/A	19.99	5%
Recycling and Waste	N/A	N/A	8.89	2%
Forestry Sinks	(6.7)	N/A	N/A	N/A
Total	425.3	100%	424.10	100%

N/A – data not provided
Source: *https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-17.pdf*

In their Climate Action Plan, Amendment No. 1 (City of Carlsbad 2020), the City provided an updated GHG inventory for the City for the baseline year of 2012. Table 2 presents the City's baseline GHG inventory.

Table 2
CITY OF CARLSBAD
2012 COMMUNITY GHG EMISSIONS

Emissions Category	GHG Emissions, $MTCO_2e$	Percentage of Total Emissions, %
On-Road Transportation	488,000	49.9
Electricity	301,000	30.8
Natural Gas	134,000	13.7
Solid Waste	25,000	2.5
Off-Road Transportation	14,000	1.4
Water	12,000	1.2
Wastewater	3,000	<1
Total	**977,000**	**100**

Source: City of Carlsbad Climate Action Plan, Amendment No. 1.
https://cityadmin.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=45370

2.3 Existing Site

As it currently exists, the existing office building is a source of GHGs from traffic, energy use, area sources, water use, treatment, and conveyance, and solid waste disposal. Emissions of GHGs have been quantified in this analysis to address existing conditions.

3.0 REGULATORY REQUIREMENTS

3.1 Federal Action

3.1.1 Clean Air Act

In *Massachusetts v. Environmental Protection Agency* (2007) 549 U.S. 497, the U.S. Supreme Court held that the U.S. Environmental Protection Agency (USEPA) has authority under the Clean Air Act to regulate CO_2 emissions if those emissions pose an endangerment to the public health or welfare.

In 2009, the USEPA issued an "endangerment finding" under the Clean Air Act, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG emissions. These findings provide the basis for adopting national regulations to mandate GHG emission reductions under the Clean Air Act.

To date, the USEPA has exercised its authority to regulate mobile sources that reduce GHG emissions via the control of vehicle manufacturers, as discussed immediately below.[2]

3.1.2 Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 in 2007 directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway

[2] The USEPA also has adopted standards that set a national limit on GHG emissions produced from new, modified, and reconstructed power plants, and has issued the Clean Power Plan, which is targeted toward the reduction of carbon emissions from existing power plants. The Clean Power Plan requires states to develop and implement plans that ensure that the power plants in their state – either individually, together or in combination with other measures – achieve interim performance rates over the period of 2022 to 2029 and final performance rates, rate-based goals or mass-based goals by 2030. In February 2016, the U.S. Supreme Court stayed implementation of the Clean Power Plan pending judicial review. Additionally, in March 2017, President Donald Trump's Executive Order on Energy Independence directed the USEPA to undertake a review of the Clean Power Plan.

Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the same federal agencies to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. In August 2016, the USEPA and NHTSA finalized the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which will apply to vehicles with model year 2018 and later. In 2018, the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks'' (SAFE Vehicles Rule). The SAFE Vehicles Rule would amend certain existing CAFE and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards, all covering model years 2021 through 2026. In short, whereas both EPA and DOT had previously adopted standards that would become more stringent over time, as of March 2020, they have adopted the SAFE Rule that now proposing freezes vehicle standards after MY2020.

3.1.3 Energy Independence and Security Act

The Energy Independence and Security Act of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.

While superseded by the USEPA and NHTSA actions described above, (i) establishing mpg targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and to create a separate fuel economy standard for trucks.

Additional provisions of this Act address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

3.2 State Action

3.1.2 Executive Orders and Legislation Establishing Overarching State Climate Policies

Executive Order S-3-05

In 2005, former Governor Schwarzenegger signed Executive Order S-3-05, which established the following GHG emission reduction goals for California: (1) by 2010, reduce GHG emissions to 2000 levels; (2) by 2020, reduce GHG emissions to 1990 levels; and (3) by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, was enacted after considerable study and expert testimony before the Legislature. The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020 (Health & Safety Code, §38550). In order to achieve this reduction mandate, AB 32 requires the ARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.

In response to the adoption of AB 32, in 2007, the ARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline. The ARB's adoption of this limit is in accordance with Health & Safety Code section 38550.

Further, in 2008, the ARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in accordance with Health & Safety Code section 38561. The *Scoping Plan* establishes an overall framework for the measures that have been adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020.

In 2014, the ARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*).[3] The stated purpose of the *First Update* is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[4] The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32. The *First Update* also noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.[5]

In conjunction with the *First Update*, the ARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[6] Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The *First Update* identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on the ARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[7] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

In December 2017, the ARB adopted *California's 2017 Climate Change Scoping Plan* (*Second Update*). The *Second Update* addresses the statewide emissions reduction target established

[3] Health & Safety Code section 38561(h) requires the ARB to update the Scoping Plan every five years.
[4] ARB, First Update (May 2014), p. 4.
[5] Id. at p. 34.
[6] Id. at p. 6.
[7] Id. at p. 32.

pursuant to Senate Bill (SB) 32 and Executive Order B-30-15, as discussed below. The *Second Update* includes continuation of the Cap-and-Trade Program through 2030, and incorporates a Mobile Source Strategy (also developed by the ARB) that is intended to increase zero emission vehicle fleet penetration and establish a more stringent Low Carbon Fuel Standard target by 2030.

When discussing project-level GHG emissions reduction actions and thresholds in the *Second Update*, the ARB states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development."[8] However, the ARB also recognizes that "[a]chieving net zero … may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."[9] To the extent that a project's CEQA analysis recommends mitigation to reduce GHG emissions, the ARB "recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally."[10]

2015 State of the State Address

In his January 2015 inaugural address, Governor Brown identified key climate change strategy pillars, including: (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing the amount of electricity derived from renewable sources from one-third to 50 percent; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests and wetlands so they can store carbon; and (6) periodically updating the State's climate adaptation strategy. As discussed below, the second and third pillars have been codified via legislation (SB 350).

[8] ARB, Second Update (November 2017), p. 101.
[9] Id. at p. 102.
[10] Id. at p. 102.

Executive Order B-30-15

In April 2015, Governor Brown signed Executive Order B-30-15, which established the following GHG emission reduction goal for California: by 2030, reduce GHG emissions to 40 percent below 1990 levels. This Executive Order also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in Executive Order S-3-05 (see discussion above). Additionally, the Executive Order directed the ARB to update its Scoping Plan (see discussion above) to address the 2030 goal. In November 2017, CARB published the 2017 Climate Change Scoping Plan, which offers the framework for achieving the 2030 reductions set forth in EO B-30-15 and SB 32.

2016 State of the State Address

In his January 2016 inaugural address, Governor Brown identified a statewide goal to bring per capita GHGs down to two tons per person. The origin of this goal is the Global Climate Leadership Memorandum of Understanding (Under 2 MOU), which established limiting global warming to less than two degrees Celsius as the guiding principle for the reduction of GHG emissions by 2050. The parties to the Under 2 MOU have agreed to pursue emissions reductions consistent with a trajectory of 80 to 95 percent below 1990 levels by 2050 and/or achieve a per capita annual emissions goal of less than two metric tons by 2050. The Under 2 MOU has been signed or endorsed by 127 jurisdictions (including California) that represent 27 countries and six continents.

Senate Bill 32, and Assembly Bill 197

Enacted in 2016, SB 32 codifies the 2030 emissions reduction goal of Executive Order B-30-15 by requiring the ARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030.

SB 32 was coupled with a companion bill: AB 197. Designed to improve the transparency of the ARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies and investments related to climate change. AB 197 also requires the ARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

3.2.2 Energy-Related Sources

Renewable Portfolio Standard

California's Renewable Portfolio Standard requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. Further, as amended in 2015 by SB 350, retail sellers of electric services must increase procurement from eligible renewable energy resources to 40 percent of total retail sales by 2024, 45 percent of total retail sales by 2027, and 50 percent of total retail sales by 2030. In 2018, SB 100 updated SB X1-2 and requires 100 percent of electric retail sales and 100 percent of electricity procured to serve state agencies be carbon-free by 2045.

Building Energy Efficiency Standards (Title 24)

Title 24, Part 6, of the California Code of Regulations regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The California Energy Commission's (CEC) 2016 Building Energy Efficiency Standards became effective on January 1, 2017. The 2019 Building Energy Efficiency Standards became effective on January 1, 2020. According to the report prepared for the California Energy Commission (CEC) by NORESCO

(NORESCO 2018), the 2019 standards would provide first-year energy savings for energy use, energy demand, and natural gas use of 10.7%, 9%, and 1%, respectively

The California Public Utilities Commission, CEC, and the ARB also have a shared, established goal of achieving Zero Net Energy (ZNE) for new construction in California. The key policy timelines include: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030.

The ZNE goal generally means that new buildings must use a combination of improved efficiency and renewable energy generation to meet 100 percent of their annual energy need, as specifically defined by the CEC:

"A ZNE Code Building is one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building, at the level of a single 'project' seeking development entitlements and building code permits, measured using the [CEC]'s Time Dependent Valuation (TDV) metric. A ZNE Code Building meets an Energy Use Intensity value designated in the Building Energy Efficiency Standards by building type and climate zone that reflect best practices for highly efficient buildings."[11]

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) are commonly referred to as CALGreen, and establish voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The mandatory standards require the following:

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;

[11] CEC, 2015 Integrated Energy Policy Report (2015), p. 41.

- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landsca.pe Ordinance;
- Sixty five (65) percent of construction and demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and,
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.
- CALGreen is periodically amended; the most recent 2019 standards became effective on January 1, 2020.

Appliance Energy Efficiency Standards (Title 20)

The CEC periodically amends and enforces Appliance Efficiency Regulations contained in Title 20 of the California Code of Regulations. The regulations establish water and energy efficiency standards for both federally-regulated appliances and non-federally regulated appliances. The 2017 Appliance Efficiency Regulations, dated January 2017, cover 23 categories of appliances (e.g., refrigerators; plumbing fixtures; dishwashers; clothes washer and dryers; televisions) and apply to appliances offered for sale in California. The Appliance Efficiency Standards were updated in January 2019, and cover additional appliances including desktop computers, thin clients, mobile gaming systems, portable all-in-one units, notebook computers, portable electric spas, LED light bulbs, and computer monitors.

3.2.3 Mobile Sources

Pavley Standards

AB 1493 required the ARB to adopt regulations to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks for model years 2009–2016, which are often times referred to as the "Pavley I" standards. The ARB obtained a waiver from the USEPA that allows for implementation of these regulations notwithstanding possible federal preemption concerns.

Low Carbon Fuel Standard

Executive Order S-1-07 requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by the ARB by 2020.[12] In 2009, the ARB approved the Low Carbon Fuel Standard regulations, which became fully effective in April 2010. The regulations were subsequently re-adopted in September 2015 in response to related litigation.

Advanced Clean Cars Program

In 2012, the ARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. (This program is sometimes referred to as "Pavley II.") The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs. In September 2019, the EPA withdrew the January 9, 2013 waiver of Clean Air Act preemption for California vehicle emission standards set for model years 2021 through 2025.

[12] Carbon intensity is a measure of the GHG emissions associated with the various production, distribution and use steps in the "lifecycle" of a transportation fuel.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) coordinates land use planning, regional transportation plans, and funding priorities to reduce GHG emissions from passenger vehicles through better-integrated regional transportation, land use, and housing planning that provides easier access to jobs, services, public transit, and active transportation options.[13] SB 375 specifically requires the Metropolitan Planning Organization (MPO) relevant to the project area (here, the San Diego Association of Governments [SANDAG]) to include a Sustainable Communities Strategy in its Regional Transportation Plan that will achieve GHG emission reduction targets set by the ARB by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.

For the area under SANDAG's jurisdiction, including the project site, the ARB adopted regional targets for reduction of mobile source-related GHG emissions by 7 percent for 2020 and by 13 percent for 2035. (These targets are expressed by the ARB as a percent change in per capita GHG emissions relative to 2005 levels.)

Pursuant to Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it.

Zero Emission Vehicles

Zero emission vehicles (ZEVs) include plug-in electric vehicles, such as battery electric vehicles and plug-in hybrid electric vehicles, and hydrogen fuel cell electric vehicles.

[13] ARB, First Update (May 2014), pp. 49-50.

In 2012, Governor Brown issued Executive Order B-16-2012, which calls for the increased penetration of ZEVs into California's vehicle fleet in order to help California achieve a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of that statewide target for the transportation sector, the Executive Order also calls upon the ARB, CEC and the California Public Utilities Commission to establish benchmarks that will: (1) allow over 1.5 million ZEVs to be on California roadways by 2025, and (2) provide the State's residents with easy access to ZEV infrastructure.

In its *First Update*, the ARB recognized that the light-duty vehicle fleet "will need to become largely electrified by 2050 in order to meet California's emission reduction goals."[14] Accordingly, the ARB's ACC program – summarized above – requires about 15 percent of new cars sold in California in 2025 to be a plug-in hybrid, battery electric or fuel cell vehicle.[15] Further, one of the elements of SB 350 (2015) – the Clean Energy and Pollution Reduction Act –establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the State's 2030 and 2050 reduction targets (see Public Utilities Code section 740.12). The ARB's *Second Update* also identified, as an element of its framework to achieve the statewide 2030 emissions reduction target codified by SB 32, the objective to put 4.2 million zero emission and plug-in hybrid light-duty electric vehicles on the road by 2030.

The proliferation of ZEVs is being supported in multiple ways. For example, California is incentivizing the purchase of ZEVs through implementation of the Clean Vehicle Rebate Project (CVRP), which is administered by a non-profit organization (The Center for Sustainable Energy) for the ARB and currently subsidizes the purchase of passenger near-zero and ZEVs. Additionally, CALGreen requires new residential and non-residential construction to be pre-wired to facilitate the future installation and use of electric vehicle chargers (see Section 4.106.4 and Section 5.106.5.3 of 2016 CALGreen Standards for the residential and non-residential pre-wiring requirements, respectively). As a final example, in January 2017, San Diego Gas & Electric

[14] Id. at p. 48.
[15] Id. at p. 47.

Company (SDG&E) applied to the California Public Utilities Commission for authority to implement numerous programs intended to accelerate the electrification of the transportation sector. SDG&E's application includes, but is not limited to, proposals to: (i) install up to 90,000 charging stations at single-family homes throughout the company's service area; (ii) install charging infrastructure at various park-and-ride locations; (iii) provide incentives for electric taxis and shuttles; and, (iv) provide educational programs and financial incentives for the sale of electric vehicles.

Also of note is AB 1236 (2015), as enacted in California's Planning and Zoning Law, which requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified.

3.2.4 Water Sources

In response to an ongoing drought in California, Executive Order B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The Executive Order includes specific directives that set strict limits on water usage in the State, and many of the directives have since become permanent water-efficiency standards and requirements. In response to this Executive Order, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

3.2.5 Solid Waste Sources

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50 percent of all solid waste on and after January 1, 2000; and (3) diversion of 75 percent of all solid waste on or after 2020, and annually thereafter. The California Department of Resources Recycling and Recovery (CalRecycle) is required to develop strategies, including source reduction, recycling, and composting activities, to achieve the 2020 goal.

CalRecycle published a discussion document, entitled *California's New Goal: 75 Percent Recycling*, which identified concepts that would assist the State in reaching the 75 percent goal by 2020. Subsequently, in August 2015, CalRecycle released the *AB 341 Report to the Legislature*, which identifies five priority strategies for achievement of the 75 percent goal: (1) moving organics out of landfills; (2) expanding recycling/manufacturing infrastructure; (3) exploring new approaches for State and local funding of sustainable waste management programs; (4) promoting State procurement of post-consumer recycled content products; and, (5) promoting extended producer responsibility.

3.3 Local Action

3.3.1 San Diego Forward

In October 2015, and in accordance with the requirements established by SB 375 (discussed above), SANDAG adopted *San Diego Forward: The Regional Plan*. The plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl."

In December 2015, the ARB accepted SANDAG's GHG emissions quantification determination for the *San Diego Forward* plan and found that it would meet the regional emission reduction targets adopted by the ARB in furtherance of SB 375 (see ARB Executive Order G-15-075). Emission reduction targets beginning October 1, 2018 for SANDAG are 15% in 2020 and 19% in 2035.

3.3.2 City of Carlsbad Requirements

In September 2015, the City of Carlsbad adopted a Climate Action Plan (CAP) that outlines actions that the City will undertake to achieve its proportional share of GHG reductions. As part of the CAP, the City developed programs designed to require new development to meet the City's GHG reduction goals.

In March 2019, the City Council adopted several ordinances aimed at reducing GHGs in new construction and alterations to existing buildings. Projects requiring building permits will be subject to these ordinances, which include the following:

- Energy Efficiency – Ord. No. CS-347
- Solar Photovoltaic Systems – Ord. No. CS-347
- Water Heating Systems using Renewable Energy (Ord. Nos. CS-347 and CS-348)
- Electric Vehicle Charging – Ord. No. CS-349
- Transportation Demand Management – Ord. No. CS-350

In January 2020, the City's Climate Action Plan (CAP) was withdrawn due to errors in VMT calculations. The City has subsequently developed an updated CAP. The updated CAP was adopted by the City in June 2020 (City of Carlsbad 2020). The CAP is designed to reduce Carlsbad's greenhouse gas (GHG) emissions and streamline environmental review of future development projects in the city in accordance with the California Environmental Quality Act (CEQA).

The CAP includes goals, policies, and actions for Carlsbad to reduce GHG emissions and combat climate change and includes:

- An inventory of Carlsbad's citywide and local government GHG emissions;
- Forecasts of future citywide and local government GHG emissions;
- A comprehensive, citywide strategy and actions to manage and reduce GHG emissions, with emission targets through 2035; and
- Actions that demonstrate Carlsbad's commitment to achieve state GHG reduction targets by creating enforceable measures, and monitoring and reporting processes to ensure targets are met.

The timeframe for the Plan extends from the date of adoption through 2035.

The forecast emissions in the CAP incorporate reductions from (1) state and federal actions, (2) General Plan land use and roadways, and (3) additional General Plan policies and actions. This chapter describes additional GHG reduction measures to close the emissions "gap" between emissions targets and forecast emissions for 2035. These are:

- Residential, commercial and industrial photovoltaic systems
- Building cogeneration
- Single-family, multi-family and commercial efficiency retrofits
- Commercial commissioning
- CALGreen building code
- Solar water heater/heat pump installation
- Efficient lighting standards
- Increased zero-emissions vehicle travel
- Transportation Demand Management (TDM)
- Citywide renewable projects
- Water delivery and conservation

Table 3 presents a summary of the forecast community emissions for 2020 and 2035 with implementation of the CAP GHG reduction measures.

Table 3
FORECAST CITY OF CARLSBAD COMMUNITY EMISSIONS WITH CAP GHG REDUCTION MEASURES AND TARGETS

Year	Business as Usual Forecast, $MTCO_2e$	Total Modified Baseline Forecast	CAP GHG Reduction Measures, $MTCO_2e$	Forecast Community Emissions with CAP GHG Reduction Measures, $MTCO_2e$	GHG Emission Targets, $MTCO_2e$	Emission Target Met?
2020	926,000	N/A	N/A	N/A	939,000	Yes
2035	956,000	588,817	142,918	445,899	472,000	Yes

Source: City of Carlsbad CAP Amendment No. 1, https://cityadmin.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=45370

The City's General Plan (City of Carlsbad 2015) adopted policies to implement the Climate Action Plan, including the following:

- 9-P.1 Enforce the Climate Action Plan as the city's strategy to reduce greenhouse gas emissions.
- 9-P.2 Continue efforts to decrease use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction and recycling, and efficient building design and use

As discussed in the Transportation Impact Analysis (Linscott, Law and Greenspan 2020), the City has also adopted a Mobility Element within the General Plan. General Plan Policy 3-P.11 requires implementation of transportation demand management (TDM) and transportation systems management (TSM) strategies. The TDM is discussed in detail in the Transportation Impact Analysis.

4.0 SIGNIFICANCE THRESHOLDS

According to Appendix G of the CEQA Guidelines, the following criteria are considered to establish a significance threshold for GCC impacts:

Would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Carlsbad has adopted a Climate Action Plan (CAP) that serves as an environmental review tiering document pursuant to Seciton 15183.5 of the CEQA Guidelines. According to the CAP, any discretionary project that will have GHG emissions greater than 900 MT CO2e must either demonstrate consistency with the CAP or submit a project-specific GHG analysis for review and approval. The CAP states that new projects demonstrated to emit less than 900 MT CO2e would not contribute considerably to cumulative climate change impacts, and therefore do not need to demonstrate consistency with the CAP.

All projects requiring building permits are subject to the City's ordinances discussed in Section 3 of this report, as applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gases. Projects within the state of California are also required to be consistent with state and regional plans designed to reduce GHG emissions as described in Section 3.

To address the project's consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions, a discussion of the project's proposed features to comply with local GHG ordinances is provided in Section 5.

5.0 GREENHOUSE GAS EMISSIONS

GHG emissions associated with the Chick-fil-A project were estimated for six categories of emissions: (1) construction; (2) area sources (including landscape equipment use, routine maintenance activities); (3) energy use, including electricity and natural gas usage; (4) water consumption, use, and treatment; (5) solid waste disposal, and (6) vehicles. The analysis also includes an estimate of GHG emissions from energy use that assumes the restaurant will be constructed to 2019 Title 24 standards. The complete emissions inventory is summarized below and included in the Appendix.

5.1 Existing Conditions

As discussed above, the site is currently occupied by a 10,977-square foot commercial office building. The building is currently occupied and is in use. As it exists, the site is a source of GHG emissions.

To calculate the GHG emissions associated with the existing building, California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used. The model was run for 2022 operations to provide a basis of comparison with the project. CalEEMod was run using historial data (CalEEMod option) for energy efficiency because the building was constructed in 1972 and was not built to current Title 24 standards. According to the CalEEMod User's Guide, the historical energy use reflects Title 24 as of 2005, which likely underestimates the energy use of the existing building, and provides a conservative estimate of net GHG emissions for the project.

The carbon intensity of electricity was adjusted based on the statewide target of 60% renewable energy by 2030, assuming an operational year of 2022. CalEEMod includes energy intensity factors for utilities that are based on emission factors for electricity that are based on Power Utility Protocol reports submitted to the California Climate Action Registry (CCAR) with the year 2009 emissions reported in CalEEMod. Based on the SDG&E Provisional Closing Report (SDG&E 2012), SDG&E obtained 10.2% of its electricity from renewable sources in 2009. SDG&E would

therefore be required to obtain an additional 22.8% of its electricity from renewable sources to meet the 33% RPS by 2020. As mandated by SB 350 and further updated by SB100, SDG&E would ultimately be required to meet a 60% RPS by 2030. Because the project would be operational in 2022, assuming a linear increase in renewables, the carbon intensity of SDG&E's energy was adjusted downward by 6.99% from 2020 RPS implementation, which exceed the CalEEMod default values by 22.8%.

Trip generation rates from the traffic analysis prepared for the project (Linscott, Law and Greenspan 2020) were used to calculate vehicular GHG emissions for weekday trips. CalEEMod default values for Saturday and Sunday trips were used in the analysis. According to SANDAG (SANDAG 2002), trip lengths for office buildings would be 8.8 miles. CalEEMod default values for weekday trips were overridden within the model to provide a region-specific estimate of trip lengths based on SANDAG data rather than statewide default values that are used within CalEEMod.

Table 4 presents a summary of the GHG emissions from the existing building for the year 2022, which represents the first fully operational year of the project. GHG emissions associated with the project include CO_2, CH_4, and N_2O. As discussed in Section 2.2, CO_2 has a GWP of 1, CH_4 has a GWP of 25, and N_2O has a GWP of 298. To calculate CO_2e, the emissions of each of these three gases were multiplied by their GWP, and the total adjusted emissions are summed to provide an estimate of CO_2e.

Table 4 SUMMARY OF EXISTING OPERATIONAL GREENHOUSE GAS EMISSIONS - 2022				
Emission Source	**Annual Emissions (Metric tons/year)**			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Operational Emissions				
Area Sources	2.00E-04	0.0000	0.0000	2.10E-04
Energy Use	54	0.00191	0.00057	55
Water Use	9.7	0.0640	0.00157	12
Solid Waste Management	1.0	0.0612	0.0000	3
Vehicle Emissions	168	0.0088	0.0000	168
Total	**233**	**0.1359**	**0.0021**	**237**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**233**	**3**	**1**	**237**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

Because the State of California has established a target reduction of 40% below 1990 levels by 2030, net GHG emissions for 2030 were calculated with CalEEMod for the existing office building. 2030 emissions for the existing office building are presented in Table 5. The 2030 operational scenario results in a decrease in GHG emissions due to further implementation of the RPS to 60% renewables by 2030, and due to emission standards accounted for within the EMFAC2014 model that are included within CalEEMod. No other future reductions in GHG emissions are included in Table 5.

Also, because the City of Carlsbad has set forth its GHG reduction goals based on 2035, net GHG emissions for 2035 were calculated with CalEEMod for the existing office building for 2035. 2035 emissions for the existing building are presented in Table 6. For the purpose of this analysis, the only change in the emission estimates are attributable to emission standards for vehicles in 2035.

Table 5
SUMMARY OF EXISTING OPERATIONAL GREENHOUSE GAS EMISSIONS - 2030

Emission Source	Annual Emissions (Metric tons/year)			
	CO_2	CH_4	N_2O	CO_2e
Operational Emissions				
Area Sources	2.00E-04	0.0000	0.0000	2.10E-04
Energy Use	42	0.00144	0.00049	42
Water Use	7.0	0.0639	0.00155	9
Solid Waste Management	1.0	0.0612	0.0000	3
Vehicle Emissions	134	0.0065	0.0000	134
Total	**184**	**0.1330**	**0.0020**	**188**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**184**	**3**	**1**	**188**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

Table 6
SUMMARY OF EXISTING OPERATIONAL GREENHOUSE GAS EMISSIONS - 2035

Emission Source	Annual Emissions (Metric tons/year)			
	CO_2	CH_4	N_2O	CO_2e
Operational Emissions				
Area Sources	2.00E-04	0.0000	0.0000	2.10E-04
Energy Use	42	0.00144	0.00049	42
Water Use	7.0	0.0639	0.00155	9
Solid Waste Management	1.0	0.0612	0.0000	3
Vehicle Emissions	127	0.0061	0.0000	127
Total	**177**	**0.1326**	**0.0020**	**181**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**177**	**3**	**1**	**181**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

5.2 Construction Greenhouse Gas Emissions

Construction GHG emissions include emissions from demolition of the existing building and construction of the Chick-fil-A building, including use of heavy construction equipment, truck traffic, and worker trips. Emissions were calculated using CalEEMod, Version 2016.3.2, which is the newest land use emissions model developed by the California Air Pollution Control Officers Association (CAPCOA) () (CAPCOA 2016), for completed and proposed construction. Construction is anticipated to be carried out in three main phases. The first phase of construction involves demolition of the existing office building. The second phase of construction involves site preparation/grading. Grading will occur over the entire site (33,964 square feet), and will include 2,360 cubic yards of cut and 20 cubic yards of fill, with approximately 2,290 cubic yards of export for a total of 286 haul truck trips. The project includes the building and construction of site parking, including 36 parking spaces. It was assumed that following demolition and grading, construction of the building, paving, and architectural coatings application could occur concurrently during the final month of construction. It was assumed based on input from the project applicant that the entire construction project would be completed within 6 months, starting in the summer of 2021 and ending at the end of 2021. Table 7 presents the construction-related emissions associated with construction of the project.

Table 7
Construction GHG Emissions, Construction Year 2021
Total MT

Construction Phase	$MTCO_2e$
Construction	115

Per guidance from the SCAQMD (SCAQMD 2008), construction emissions are amortized over a 30-year period to account for the contribution of construction emissions over the lifetime of the project. Amortizing the emissions from construction of the project over a 30-year period would result in an annual contribution of 4 MT CO_2e. These emissions are added to operational emissions to account for the contribution of construction to GHG emissions for the lifetime of the project.

5.3 Operational Greenhouse Gas Emissions

GHG emissions associated with operation of the Chick-fil-A restaurant would include emissions from area sources, energy use, water use, solid waste disposal, and vehicles.

5.3.1 Area Sources

CalEEMod assumes that area source emissions associated with the project would include minor emissions from landscaping equipment and maintenance of the building.

5.3.2 Energy Use

As discussed above, CalEEMod assumes a baseline of 2016 Title 24 standards. To account for implementation of the 2019 Title 24 standards, Title 24 electricity use was reduced by 10.7% and Title 24 natural gas use was reduced by 1% based on reductions from the 2016 Title 24 standards (CalEEMod defaults) for electricity and natural gas usage as discussed in Section 1.2, Page 7, for Non-residential Newly Construction Buildings in *Impact Analysis – 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings* (NORESCO 2018). The Title 24 energy use within CalEEMod was adjusted based on these reductions.

An additional feature that will be included in the project design include installation of a 5 kW solar array which generates approximately 15.12 kWh/day on the building to generate electricity (based on design information from the project engineering team). This feature was taken into account in CalEEMod.

5.3.3 Water Usage

Water usage was estimated based on CalEEMod. The GHG emissions associated with water usage, conveyance, and treatment, are included within CalEEMod calculations. For the purpose

of this analysis, it was assumed that the project would be equipped with low-flow fixtures and would utilize water-efficient irrigation. These measures were taken into account in CalEEMod within the "mitigation" section of the model, by selecting low-flow fixtures and assuming the CalEEMod default value for water-efficient irrigation of 6.1% reduction in water use.

5.3.4 Vehicle Emissions

The analysis of GHG emissions from vehicles is based on total vehicle miles traveled (VMT) annually. According to the traffic analysis, the restaurant would generate 700 daily trips per 1,000 square foot of building space, and the pass-by trip rate would be 25%, the diverted trip rate would be 25%, and primary trips would be 50% (Linscott, Law, and Greenspan 2020). The traffic analysis does not differentiate between vendor trips, employee trips and other trips; the fleet mix within CalEEMod accounts for this distribution. The traffic analysis does not differentiate between weekend and weekday trips; the restaurant is open Monday through Saturday and the traffic analysis trip generation rate was used for all 6 days of operation. According to SANDAG guidance (SANDAG 2002), trip lengths would be 4.7 miles. These trip generation rates were included in the analysis.

According to the traffic analysis, the project is proposing a traffic signal at its main entrance to provide a controlled pedestrian crossing to the west side of Avenida Encinas. The west side of Avenida Encinas is developed with office/employment uses. The pedestrian access would therefore encourage pedestrians from these locations to walk to the restaurant.

Based on CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010), Measure SDT-1, Neighborhood/Site Enhancements, providing pedestrian network improvements such as installing a traffic signal at the main entrance to the project to allow pedestrian access from the existing employment center would reduce VMT. The range of effectiveness is from 0 to 2% reduction in VMT. In urban/suburban areas, the VMT reduction for this measure ranges from 1% (for on-site pedestrian improvements) to 2% (for pedestrian improvements on-site and connecting to off-site). While the signal would connect the project with off-site uses, for conservative

purposes, it was assumed within CalEEMod that the signal would reduce VMT by 1%. Therefore, the on-site pedestrian improvements selection was used within CalEEMod under measure SDT-1.

5.3.5 Solid Waste

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, transportation of waste, and disposal. Solid waste generation rates were estimated from CalEEMod Model, and GHG emissions from solid waste disposal were estimated using the model, assuming landfilling of solid waste with flaring. It was assumed based on statewide solid waste reduction goals per SB 341 that solid waste generation would be reduced by 50%.

5.3.6 Operational Emissions Summary

The results of the inventory for operational emissions for the project are presented in Table 8. These include GHG emissions associated with buildings (natural gas, purchased electricity), water consumption (energy embodied in potable water) and wastewater treatment and conveyance, solid waste disposal (including landfill gas generation), and vehicles.

As shown in Table 8, the net CO_2e emissions from the project would be 712 $MTCO_2e$. This level is below the City's CAP threshold of 900 MT CO2e. The project's contribution to GHG emissions would therefore be less than significant.

Table 8 SUMMARY OF OPERATIONAL GREENHOUSE GAS EMISSIONS - 2022				
Emission Source	**Annual Emissions (MT/year)**			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Operational Emissions				
Area Sources	7.00E-04	0.0000	0.0000	7.50E-04
Energy Use	63	0.00189	0.00083	64
Water Use and Wastewater Treatment/Conveyance	3	0.0273	0.00066	4
Solid Waste Disposal	4	0.2370	0.0000	10
Vehicle Emissions	866	0.0558	0.0000	867
Amortized Construction Emissions	4	0.0000	0.0000	4
Total	**940**	**0.3220**	**0.0015**	**949**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**940**	**8**	**1**	**949**
Existing CO_2 Equivalent Emissions	**233**	**3**	**1**	**237**
Net CO_2 Equivalent Emissions	**707**	**5**	**0**	**712**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

According to the City's CAP guidance, projects that are projected to emit fewer than 900 MTCO2e annually would not make a considerable contribution to the cumulative impact of climate change, and therefore, do not need to demonstrate consistency with the CAP. Regardless of this screening threshold, all projects requiring building permits are subject to the above-referenced CAP ordinances. The project is therefore required to show compliance with the ordinances. The following discussion presents the project's consistency with CAP ordinances.

The project has implemented all feasible GHG reduction measures within the project design, including the following:

- Solar Photovoltaic Systems - The project will install a 5 kW rooftop solar photovoltaic system. The solar system will provide 1.5% of the restaurant's annual electricity

consumption needs based on information from the applicant's architect. Additional solar panels are not feasible due to the size of the panels and the configuration of the rooftop and building.

- Water Heating Systems using Renewable Energy - The project will utilize electric water heating, and will utilize electricity generated by the photovoltaic system to provide 40% of the electricity for service water heating.

- Electric Vehicle Charging - The project will install four Level 2, 240 V connection electric vehicle (EV) charging stations; two stations will be equipped with chargers installed and two with conduit writing to pullboxes at the spaces, such that there will be 2 EV-ready spaces and 2 EV-capable spaces. EV charging stations are open to both employees and customers. For conservative purposes, GHG reductions were not calculated for the EV charging stations.

- Transportation Demand Management – The project will prepare a Tier 1 TDM to the satisfaction of the City Engineer. A Tier 1 TDM Plan requires the following elements:

    - Existing conditions and context
    - Agreement to implement the following strategies:
        - Designation of a transportation point of contact who will attend at least one annual citywide program event/meeting
        - Promotion of at least one citywide program per year (if available)
        - Distribution of the citywide program flyer to all new hires
        - Agreement to adhere to monitoring and reporting requirements as described in Section 2.7 of the *Carlsbad TDM Handbook*

Chick-fil-A Carlsbad has reviewed the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010) to determine which measures could be implemented to reduce GHG emissions on site. Table 9 presents a summary of the measures and a discussion of their applicability and feasibility.

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
Energy	BE-1	Buildings exceed Title 24 standard by X%	0.2-5.5% for electricity, 0.7-10% for natural gas	The building is already energy efficient in both electricity and natural gas use, and additional efficiencies would not reduce GHG emissions appreciably.
	BE-4	Install energy efficient appliances	2-4% electricity for residential	N/A
	BE-5	Install energy efficient boilers	1.2-18.4% boiler emissions	No boilers proposed
	LE-1	Install higher efficiency public street and area lighting	16-40% of electricity used by outdoor lighting	LEDs will be used for outdoor lighting. No credit was taken for this feature.
	LE-3	Replace traffic lights with LED traffic lights	90% of emissions from electricity from existing traffic lights	The project is not replacing traffic lights and will use LED lighting at the new signal
	AE-1	Establish onsite renewable or carbon-neutral energy systems	Dependent on amount of energy generated	The site is proposing to use renewable energy for water heating and will install rooftop solar PV
	AE-2	Establish onsite renewable energy systems – solar power	Dependent on amount of energy generated	The project will install rooftop solar PV
	AE-3	Establish onsite renewable energy systems – wind power	Dependent on amount of energy generated	The site is not appropriate for a wind power installation
	AE-4	Utilize a combined heat and power system	0-46% of emissions associated with electricity use.	The project will utilize renewables for water heating

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
Transportation	LUT-1	Increase density	0.8-30% of emissions associated with vehicles	N/A
	LUT-2	Increase location efficiency	10-65% of emissions associated with vehicles	The project is a restaurant to be located in an employment center
	LUT-3	Increase diversity of urban and suburban developments (mixed use)	9-30% of emissions associated with vehicles	The project increases the diversity of the immediate vicinity by providing a restaurant in an employment center
	LUT-4	Increase destination accessibility	6.7-20% of emissions associated with vehicles	The project is located adjacent to the I-5 freeway and includes a traffic signal for pedestrian access
	LUT-5	Increase transit accessibility	0.5-24.5% of emissions associated with vehicles	N/A
	LUT-6	Integrate affordable and below market rate housing	0.04-1.2% of emissions associated with vehicles	N/A
	LUT-7	Orient project toward non-auto corridor	0.25-0.5% of emissions associated with vehicles	The project is located adjacent to the I-5 freeway and includes a traffic signal for pedestrian access
	LUT-8	Locate project near bike path/bike lane	0.625% of emissions associated with vehicles	Bike lanes exist on Avenida Encinas
	SDT-1	Provide pedestrian network improvements	0-2% of emissions	The project includes a traffic

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
			associated with vehicles	signal for pedestrian access
	SDT-2	Provide traffic calming measures	0.25-1% of emissions associated with vehicles	N/A
	SDT-3	Implement a neighborhood electric vehicle (NEV) network	0.5-12.7% of emissions associated with vehicles	N/A
	SDT-4	Create urban non-motorized zones	0.01-0.2% annual VMT reduction	N/A
	SDT-5	Incorporate bike lane street design (on-site)	0.05-0.14% GHG reduction	N/A
	SDT-6	Provide bike parking in non-residential projects	0.625% VMT reduction	Bike parking will be incorporated into the site plan. No additional GHG reductions were assumed.
	SDT-7	Provide bike parking with multi-unit residential projects	No reduction quantified	N/A
	SDT-8	Provide electric vehicle parking	No reduction quantified	The project will include four EV charging stations for electric vehicle parking
	SDT-9	Dedicate land for bike trails	No reduction quantified	N/A
	PDT-1	Limit parking supply	5-12.5% of emissions associated with vehicles	The project must comply with parking requirements within the City of Carlsbad Limiting the parking supply is infeasible
	PDT-2	Unbundle parking cost from property cost	2.5-13% of emissions associated with vehicles	N/A
	PDT-3	Implement market price public parking	2.8-5.5% of emissions	N/A

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
			associated with vehicles	
	PDT-4	Require residential area parking permits	0.08% GHG reduction	N/A
	TRT-1	Implement commute trip reduction program – voluntary	1-6.2% of emissions associated with commuting	The project will prepare a Transportation Demand Management Program to address trip reductions
	TRT-2	Implement commute trip reduction program – required implementation/monitoring	4-21% of emissions associated with commuting	The project will prepare a Transportation Demand Management Program to address trip reductions
	TRT-3	Provide ride-sharing programs	1-15% of emissions associated with commuting	The project will prepare a Transportation Demand Management Program to address trip reductions
	TRT-4	Implement subsidized or discounted transit program	0.3-20% of emissions associated with commuting	The project is located along bus routes 444 and 445 within the BREEZE bus system. Since the majority of trips are associated with customers and not employees, no credit was taken for proximity to bus routes
	TRT-6	Encourage telecommuting and alternative work schedules	0.7-5.5% of emissions associated with commuting	The project is a restaurant and cannot be operated with telecommuting

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
	TRT-7	Implement commute trip reduction marketing	0.8-4.0% of emissions associated with commuting	The project will prepare a Transportation Demand Management Program to address trip reductions
	TRT-9	Implement car-sharing programs	0.4-0.7% of emissions associated with vehicles	The project will prepare a Transportation Demand Management Program to address trip reductions
	TRT-10	Implement a school pool program	7.2-15.8% of emissions associated with school trips	N/A
	TRT-11	Provide employer-sponsored vanpool/shuttle	0.3-13.4% of emissions associated with commuting	N/A
	TRT-13	Implement school bus program	38-63% of emissions associated with school trips	N/A
	TRT-14	Price workplace parking	0.1-19.7% of emissions associated with commuting	N/A
	TRT-15	Implement employee parking “cash-out”	0.6-7.7% of emissions associated with commuting	N/A
	VT-1	Electrify loading docks and/or require idling reduction systems	No reduction quantified	The project is not designed with loading docks as it is not a warehousing or distribution center. Idling of construction vehicles will be reduced to five minutes in accordance with

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
				ARB idling restrictions No signage is proposed but construction managers will monitor activity.
	VT-2	Utilize alternative fueled vehicles	No reduction quantified	Because the project does not own vehicles, this measure is not applicable.
	VT-3	Use electric or hybrid vehicles	0.4-20.3% GHG reduction	The project will include four EV charging stations for electric vehicle parking
Water	WSW-1	Use reclaimed water	Up to 81% of emissions associated with water use	It is not feasible to use reclaimed water at the site due to the nature of the project as a restaurant, the small size of the site and the lack of extensive landscaping.
	WSW-2	Use gray water	Up to 100% of emissions associated with outdoor water use	It is not feasible to use gray water at the site due to the small size of the site and the lack of extensive landscaping.
	WSW-3	Use locally sourced water supply	11-75% of emissions associated with water use	N/A
	WUW-1	Install low-flow water fixtures	20% of emissions associated with indoor water use	The project will install low-flow fixtures
	WUW-2	Adopt a water conservation strategy	Varies depending on system	The site will include drip irrigation and drought-tolerant landscaping. No additional credit

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
				was taken for this measure.
	WUW-3	Design water efficient landscapes	0-70% of emissions associated with outdoor water use	The landscaping will be water efficient. No additional credit was taken for this measure.
	WUW-4	Use water-efficient landscape irrigation systems	6.1% of emissions associated with outdoor water use	The project will use water-efficient landscape irrigation systems
	WUW-5	Reduce turf in landscapes and lawns	Varies	No turf is proposed.
	WUW-6	Plant native or drought resistant trees and vegetation	No reduction quantified	Drought tolerant landscaping has been included in the plan.
Area Landscaping	A-1	Prohibit gas powered landscape equipment	Varies	The landscaping crew will use battery-powered landscaping equipment.
	A-2	Implement lawnmower exchange program	No reduction quantified	N/A
	A-3	Electric yard equipment compatibility	No reduction quantified	N/A
Solid Waste	SW-1	Institute or extend recycling and composting services	Varies	The project will include recycling bins to meet statewide requirements for solid waste reduction
	SW-2	Recycle demolished construction material	Varies	65% of demolished construction material will be recycled per City / CALGreen requirements.
Vegetation	V-1	Urban tree planting	Varies	The project does not have the ability to individually

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
				plant trees to the extent that they would reduce GHG emissions substantially
	V-2	Create new vegetated open space	Varies	N/A
Construction	C-1	Use alternative fuels for construction equipment	0-22% reduction in GHG emissions	Due to the small size of the project and the limited duration and extent of construction, this measure is not feasible and would not result in substantial GHG emission reductions.
	C-2	Use electric and hybrid construction equipment	2.5-80% reduction in GHG emissions	Due to the small size of the project and the limited duration and extent of construction, this measure is not feasible and would not result in substantial GHG emission reductions.
	C-3	Limit construction equipment idling beyond regulation requirements	Varies	Construction equipment idling will be limited on site. No credit was taken for this measure.
	C-4	Institute a heavy-duty off-road vehicle plan	No reduction quantified	Due to the small size of the project and the limited duration and extent of construction, this measure is not feasible and would not result in substantial GHG emission reductions.

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
	C-5	Implement a construction vehicle inventory tracking system	No reduction quantified	A construction vehicle inventory tracking system will be implemented during construction. No credit was taken for this measure.
Miscellaneous	Misc-1	Establish a carbon sequestration project	Varies	The project will purchase offsets as mitigation which may include carbon sequestration programs
	Misc-2	Establish off-site mitigation	Varies	The project will provide offsets as mitigation
	Misc-3	Use local and sustainable building materials	Varies	Concrete from Coronado Stone will be used in the construction of the building. This material is sourced locally and contains recycled materials.
	Misc-4	Require best management practices in agriculture and animal operations	No reduction quantified	N/A
	Misc-5	Require environmentally responsible purchasing	Varies	The project has proposed a steel instead of wood trellis and complies with CALGreen requirements. While steel production results in higher GHG emissions, Structural steel contains over 90% recycled content and does

Table 9 CAPCOA Greenhouse Gas Reduction Measures Applicability to Project				
Category	**Measure Number**	**Description**	**GHG Reduction**	**Applicability to Project**
				not require continued maintenance as does wood, thus reducing GHG emissions from continued maintenance.
	Misc-6	Implement an innovative strategy for GHG mitigation	Varies	The project will provide offsets as mitigation which may include innovative GHG reduction strategies

5.3.7 Operational Emissions Summary – Future Years

Because the State of California has established a target reduction of 40% below 1990 levels by 2030, net GHG emissions for 2030 were calculated with CalEEMod for the project. Net 2030 emissions for the project are presented in Table 10. The 2030 operational scenario results in a decrease in GHG emissions due to further implementation of the RPS to 60% renewables by 2030, and due to emission standards accounted for within the EMFAC2014 model that are included within CalEEMod. No other future reductions in GHG emissions are included in Table 10.

Also, because the City of Carlsbad has set forth its GHG reduction goals based on 2035, net GHG emissions for 2035 were calculated with CalEEMod for the project for 2035. Net 2035 emissions for the project are presented in Table 11. For the purpose of this analysis, the only change in the emission estimates are attributable to emission standards for vehicles in 2035.

Table 10 SUMMARY OF OPERATIONAL GREENHOUSE GAS EMISSIONS - 2030				
Emission Source	**Annual Emissions (MT/year)**			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Operational Emissions				
Area Sources	7.00E-04	0.0000	0.0000	7.50E-04
Energy Use	54	0.00153	0.00077	54
Water Use and Wastewater Treatment/Conveyance	2	0.0272	0.00066	3
Solid Waste Disposal	4	0.2370	0.0000	10
Vehicle Emissions	699	0.0399	0.0000	700
Amortized Construction Emissions	4	0.0000	0.0000	4
Total	**763**	**0.3056**	**0.0014**	**771**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**763**	**8**	**0**	**771**
Existing CO_2 Equivalent Emissions	**184**	**3**	**1**	**188**
Net CO_2 Equivalent Emissions	**579**	**5**	**0**	**583**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

Table 11 SUMMARY OF OPERATIONAL GREENHOUSE GAS EMISSIONS - 2035				
Emission Source	**Annual Emissions (MT/year)**			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Operational Emissions				
Area Sources	7.00E-04	0.0000	0.0000	7.50E-04
Energy Use	54	0.00153	0.00077	54
Water Use and Wastewater Treatment/Conveyance	2	0.0272	0.00066	3
Solid Waste Disposal	4	0.2370	0.0000	10
Vehicle Emissions	664	0.0373	0.0000	664
Amortized Construction Emissions	4	0.0000	0.0000	4
Total	**728**	**0.3030**	**0.0014**	**736**
Global Warming Potential Factor	**1**	**25**	**298**	
CO_2 Equivalent Emissions	**728**	**8**	**0**	**736**
Existing CO_2 Equivalent Emissions	**177**	**3**	**1**	**181**
Net CO_2 Equivalent Emissions	**551**	**5**	**0**	**555**

Note: CO_2 is defined as having a global warming potential factor of 1; therefore, CO_2 equivalent (CO_2e) emissions are calculated based on multiplication of the emissions of each GHG times its global warming potential factor. This provides an estimate of the contribution of each GHG based on the contribution of equivalent amounts of CO_2.

6.0 CONSISTENCY WITH APPLICABLE PLANS, POLICIES, AND REGULATIONS

6.1 California GHG Scoping Plan

The project would be consistent with the 2017 Scoping Plan as it would be consistent with the policies of the Plan, as discussed below:

- **Ensure the State achieves the 2030 Target** By implementing GHG reduction measures in its project design, the project will be consistent with the State of California and the City of Carlsbad's goals of reducing emissions by 40% below 1990 levels in 2030.
- **Provide Air Quality Co-Benefits** The project would provide co-benefits to air quality through its GHG reduction measures, including meeting CALGreen requirements, installation of a solar photovoltaic system, use of renewable energy for water heating, and installation of EV charging stations on site.
- **Reduce GHG Emissions in the Electricity Sector** The project would install a solar photovoltaic system and would use renewable energy for water heating, thus reducing its grid-based electricity demand.
- **Mobile Source Strategy** The project would install EV charging stations which would encourage the use of EVs. Furthermore, the project would provide pedestrian access through installation of a traffic signal between the existing employment uses and the restaurant.
- **Waste Reduction** The project would be consistent with statewide solid waste reduction goals and include waste recycling.

6.2 San Diego Regional Plan

The San Diego Regional Plan does not provide specific regulations or requirements that apply to restaurant uses. The project would not conflict with the plan and would provide an additional contribution to mixed uses within the immediate vicinity.

6.3 City of Carlsbad GHG Requirements

The project would be consistent with the City's CAP because it would be consistent with the CAP policies designed to reduce GHG emissions. The CAP measures have been adopted by the City as ordinances. The project will be consistent with the applicable ordinances, as discussed below:

- **Energy Efficiency – Ord. No. CS-347** The project will be constructed to CALGreen standards to include Appendix A5 – Nonresidential Voluntary Measures, Energy Efficiency. These measures include installation of the solar photovoltaic system and water heating using renewable energy as discussed below.

- **Solar Photovoltaic Systems – Ord. No. CS-347** The project will install a 5 kW rooftop solar photovoltaic system as required under Ordinance CS-347 Section 6, California Energy Code 120.10(a)(2). Additional solar panels are not feasible due to the size of the panels and the configuration of the rooftop and building.

- **Water Heating Systems using Renewable Energy (Ord. Nos. CS-347 and CS-348)** The project will utilize electric water heating, and will utilize electricity generated by the photovoltaic system to provide 40% of the electricity for service water heating as required under Ordinance CS-347 Section 7, California Energy Code 120.11.

- **Electric Vehicle Charging – Ord. No. CS-349** The project will install four electric vehicle (EV) charging stations as required under Ordinance CS-349 Section 6, as specified under CALGreen Code 5.106.5.3.3. The EV charging stations will be available for both employees and visitors.

- **Transportation Demand Management – Ord. No. CS-350** The TDM ordinance requires new nonresidential development where the employees generate a minimum of 110 average daily trips (ADT) to develop a Transportation Demand Management plan. According to the traffic analysis, the project proposes to add 3,427 SF of fast-food restaurant commercial development with a maximum of 10-15 employees per shift, which

will not exceed the 110 employee ADT threshold. However, according to the traffic analysis, the project is still required to prepare a TDM plan on the basis of adding in excess of 110 total ADT to the exempt segment of Palomar Airport Road. To meet the requirements of the Mobility Element policy 3-P.11 , the Project shall prepare a Tier 1 TDM to the satisfaction of the City Engineer. A Tier 1 TDM Plan requires the following elements:

- Existing conditions and context
- Agreement to implement the following strategies:
  - Designation of a transportation point of contact who will attend at least one annual citywide program event/meeting
  - Promotion of at least one citywide program per year (if available)
  - Distribution of the citywide program flyer to all new hires
  - Agreement to adhere to monitoring and reporting requirements as described in Section 2.7 of the *Carlsbad TDM Handbook*

Furthermore, the projet's net emission increases are below the CAP threshold of 900 $MTCO_2e$. The project would therefore not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

7.0 CONCLUSIONS

Emissions of GHGs were calculated for both the existing office building and the proposed Chick-fil-A restaurant. The project would result in a net increase of 712 MT CO_2e for construction and operation. The project's emissions would be below the CAP significance threshold of 900 MTCO2e. Emissions are therefore less than significant.

The project would be consistent with the State of California's 2017 Scoping Plan, the San Diego Regional Plan, and the City's CAP and plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The project's GHG impacts are therefore less than significant.

8.0 REFERENCES

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Appendix A

Greenhouse Gas Emission Calculations

Chick fil A Carlsbad Existing - San Diego Air Basin, Annual

Chick fil A Carlsbad Existing

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.98	1000sqft	0.25	10,977.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	517.31	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS

Land Use -

Vehicle Trips - SANDAG trip lengths

Area Coating - Rule 67.0.1 coatings

Energy Use - Building constructed in 1972

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100

tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	517.31
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	CC_TL	7.30	8.80
tblVehicleTrips	CNW_TL	7.30	8.80
tblVehicleTrips	CW_TL	9.50	8.80
tblVehicleTrips	WD_TR	11.03	20.00

2.0 Emissions Summary

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	54.3428	54.3428	1.9100e-003	5.7000e-004	54.5594
Mobile	0.0446	0.1971	0.5235	1.8200e-003	0.1603	1.5300e-003	0.1618	0.0429	1.4300e-003	0.0443	0.0000	167.7738	167.7738	8.8100e-003	0.0000	167.9942
Waste						0.0000	0.0000		0.0000	0.0000	2.0725	0.0000	2.0725	0.1225	0.0000	5.1346
Water						0.0000	0.0000		0.0000	0.0000	0.6191	9.0807	9.6998	0.0640	1.5700e-003	11.7672
Total	**0.0921**	**0.2098**	**0.5343**	**1.9000e-003**	**0.1603**	**2.4900e-003**	**0.1628**	**0.0429**	**2.3900e-003**	**0.0453**	**2.6917**	**231.1976**	**233.8892**	**0.1972**	**2.1400e-003**	**239.4556**

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	54.3428	54.3428	1.9100e-003	5.7000e-004	54.5594
Mobile	0.0446	0.1971	0.5235	1.8200e-003	0.1603	1.5300e-003	0.1618	0.0429	1.4300e-003	0.0443	0.0000	167.7738	167.7738	8.8100e-003	0.0000	167.9942
Waste						0.0000	0.0000		0.0000	0.0000	1.0363	0.0000	1.0363	0.0612	0.0000	2.5673
Water						0.0000	0.0000		0.0000	0.0000	0.6191	9.0807	9.6998	0.0640	1.5700e-003	11.7672
Total	**0.0921**	**0.2098**	**0.5343**	**1.9000e-003**	**0.1603**	**2.4900e-003**	**0.1628**	**0.0429**	**2.3900e-003**	**0.0453**	**1.6554**	**231.1976**	**232.8530**	**0.1359**	**2.1400e-003**	**236.8883**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**38.50**	**0.00**	**0.44**	**31.06**	**0.00**	**1.07**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0446	0.1971	0.5235	1.8200e-003	0.1603	1.5300e-003	0.1618	0.0429	1.4300e-003	0.0443	0.0000	167.7738	167.7738	8.8100e-003	0.0000	167.9942

Unmitigated	0.0446	0.1971	0.5235	1.8200e-003	0.1603	1.5300e-003	0.1618	0.0429	1.4300e-003	0.0443	0.0000	167.7738	167.7738	8.8100e-003	0.0000	167.9942

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	219.54	27.00	11.53	425,286	425,286
Total	219.54	27.00	11.53	425,286	425,286

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	8.80	8.80	8.80	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: Y

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	40.5420	40.5420	1.6500e-003	3.1000e-004	40.6766

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40.5420	40.5420	1.6500e-003	3.1000e-004	40.6766
NaturalGas Mitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
NaturalGas Unmitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	40.5420	1.6500e-003	3.1000e-004	40.6766
Total		**40.5420**	**1.6500e-003**	**3.1000e-004**	**40.6766**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	40.5420	1.6500e-003	3.1000e-004	40.6766
Total		**40.5420**	**1.6500e-003**	**3.1000e-004**	**40.6766**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.6998	0.0640	1.5700e-003	11.7672
Unmitigated	9.6998	0.0640	1.5700e-003	11.7672

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	9.6998	0.0640	1.5700e-003	11.7672
Total		**9.6998**	**0.0640**	**1.5700e-003**	**11.7672**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	9.6998	0.0640	1.5700e-003	11.7672
Total		**9.6998**	**0.0640**	**1.5700e-003**	**11.7672**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0363	0.0612	0.0000	2.5673
Unmitigated	2.0725	0.1225	0.0000	5.1346

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	10.21	2.0725	0.1225	0.0000	5.1346
Total		**2.0725**	**0.1225**	**0.0000**	**5.1346**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	5.105	1.0363	0.0612	0.0000	2.5673
Total		**1.0363**	**0.0612**	**0.0000**	**2.5673**

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

11.0 Vegetation

Chick fil A Carlsbad Existing

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.98	1000sqft	0.25	10,977.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	361.69	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Fleet Mix -

Area Coating - Rule 67.0.1 coatings

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblGrading	AcresOfGrading	0.50	0.00

tblLandUse	LandUseSquareFeet	10,980.00	10,977.00
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	720.49	361.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	CC_TL	7.30	8.80
tblVehicleTrips	CNW_TL	7.30	8.80
tblVehicleTrips	CW_TL	9.50	8.80
tblVehicleTrips	WD_TR	11.03	20.00

2.0 Emissions Summary

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	42.1468	42.1468	1.4400e-003	4.9000e-004	42.3282
Mobile	0.0304	0.1318	0.3559	1.4400e-003	0.1602	9.4000e-004	0.1612	0.0429	8.7000e-004	0.0438	0.0000	134.1636	134.1636	6.5300e-003	0.0000	134.3269
Waste						0.0000	0.0000		0.0000	0.0000	2.0725	0.0000	2.0725	0.1225	0.0000	5.1346
Water						0.0000	0.0000		0.0000	0.0000	0.6191	6.3490	6.9681	0.0639	1.5500e-003	9.0276

Total	**0.0778**	**0.1445**	**0.3667**	**1.5200e-003**	**0.1602**	**1.9000e-003**	**0.1621**	**0.0429**	**1.8300e-003**	**0.0447**	**2.6917**	**182.6596**	**185.3513**	**0.1943**	**2.0400e-003**	**190.8176**

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	42.1468	42.1468	1.4400e-003	4.9000e-004	42.3282
Mobile	0.0304	0.1318	0.3559	1.4400e-003	0.1602	9.4000e-004	0.1612	0.0429	8.7000e-004	0.0438	0.0000	134.1636	134.1636	6.5300e-003	0.0000	134.3269
Waste						0.0000	0.0000		0.0000	0.0000	1.0363	0.0000	1.0363	0.0612	0.0000	2.5673
Water						0.0000	0.0000		0.0000	0.0000	0.6191	6.3490	6.9681	0.0639	1.5500e-003	9.0276
Total	**0.0778**	**0.1445**	**0.3667**	**1.5200e-003**	**0.1602**	**1.9000e-003**	**0.1621**	**0.0429**	**1.8300e-003**	**0.0447**	**1.6554**	**182.6596**	**184.3150**	**0.1331**	**2.0400e-003**	**188.2503**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**38.50**	**0.00**	**0.56**	**31.52**	**0.00**	**1.35**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0304	0.1318	0.3559	1.4400e-003	0.1602	9.4000e-004	0.1612	0.0429	8.7000e-004	0.0438	0.0000	134.1636	134.1636	6.5300e-003	0.0000	134.3269
Unmitigated	0.0304	0.1318	0.3559	1.4400e-003	0.1602	9.4000e-004	0.1612	0.0429	8.7000e-004	0.0438	0.0000	134.1636	134.1636	6.5300e-003	0.0000	134.3269

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	219.60	27.01	11.53	425,402	425,402
Total	219.60	27.01	11.53	425,402	425,402

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	8.80	8.80	8.80	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.616428	0.037185	0.177402	0.097684	0.012090	0.005279	0.017663	0.025476	0.001931	0.001677	0.005617	0.000785	0.000782

5.0 Energy Detail

Historical Energy Use: Y

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	28.3459	28.3459	1.1800e-003	2.4000e-004	28.4454
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.3459	28.3459	1.1800e-003	2.4000e-004	28.4454
NaturalGas Mitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
NaturalGas Unmitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829

Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	28.3459	1.1800e-003	2.4000e-004	28.4454
Total		**28.3459**	**1.1800e-003**	**2.4000e-004**	**28.4454**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	28.3459	1.1800e-003	2.4000e-004	28.4454
Total		**28.3459**	**1.1800e-003**	**2.4000e-004**	**28.4454**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.9681	0.0639	1.5500e-003	9.0276
Unmitigated	6.9681	0.0639	1.5500e-003	9.0276

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	6.9681	0.0639	1.5500e-003	9.0276
Total		**6.9681**	**0.0639**	**1.5500e-003**	**9.0276**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	6.9681	0.0639	1.5500e-003	9.0276
Total		**6.9681**	**0.0639**	**1.5500e-003**	**9.0276**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	1.0363	0.0612	0.0000	2.5673
Unmitigated	2.0725	0.1225	0.0000	5.1346

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	10.21	2.0725	0.1225	0.0000	5.1346
Total		**2.0725**	**0.1225**	**0.0000**	**5.1346**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	5.105	1.0363	0.0612	0.0000	2.5673
Total		**1.0363**	**0.0612**	**0.0000**	**2.5673**

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

11.0 Vegetation

Chick fil A Carlsbad Existing - San Diego Air Basin, Annual

Chick fil A Carlsbad Existing

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.98	1000sqft	0.25	10,977.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2035
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	361.69	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	100	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	50	0
tblAreaMitigation	UseLowVOCPaintParkingValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0

tblGrading	AcresOfGrading	0.50	0.00
tblLandUse	LandUseSquareFeet	10,980.00	10,977.00
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	720.49	361.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	CC_TL	7.30	8.80
tblVehicleTrips	CNW_TL	7.30	8.80
tblVehicleTrips	CW_TL	9.50	8.80
tblVehicleTrips	WD_TR	11.03	20.00

2.0 Emissions Summary

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	42.1468	42.1468	1.4400e-003	4.9000e-004	42.3282
Mobile	0.0260	0.1242	0.3128	1.3600e-003	0.1603	7.0000e-004	0.1610	0.0429	6.5000e-004	0.0435	0.0000	126.6351	126.6351	6.1400e-003	0.0000	126.7887
Waste						0.0000	0.0000		0.0000	0.0000	2.0725	0.0000	2.0725	0.1225	0.0000	5.1346

Water						0.0000	0.0000		0.0000	0.0000	0.6191	6.3490	6.9681	0.0639	1.5500e-003	9.0276
Total	**0.0734**	**0.1369**	**0.3235**	**1.4400e-003**	**0.1603**	**1.6600e-003**	**0.1619**	**0.0429**	**1.6100e-003**	**0.0445**	**2.6917**	**175.1311**	**177.8227**	**0.1939**	**2.0400e-003**	**183.2793**

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	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	42.1468	42.1468	1.4400e-003	4.9000e-004	42.3282
Mobile	0.0260	0.1242	0.3128	1.3600e-003	0.1603	7.0000e-004	0.1610	0.0429	6.5000e-004	0.0435	0.0000	126.6351	126.6351	6.1400e-003	0.0000	126.7887
Waste						0.0000	0.0000		0.0000	0.0000	1.0363	0.0000	1.0363	0.0612	0.0000	2.5673
Water						0.0000	0.0000		0.0000	0.0000	0.6191	6.3490	6.9681	0.0639	1.5500e-003	9.0276
Total	**0.0734**	**0.1369**	**0.3235**	**1.4400e-003**	**0.1603**	**1.6600e-003**	**0.1619**	**0.0429**	**1.6100e-003**	**0.0445**	**1.6554**	**175.1311**	**176.7865**	**0.1327**	**2.0400e-003**	**180.7120**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**38.50**	**0.00**	**0.58**	**31.58**	**0.00**	**1.40**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0260	0.1242	0.3128	1.3600e-003	0.1603	7.0000e-004	0.1610	0.0429	6.5000e-004	0.0435	0.0000	126.6351	126.6351	6.1400e-003	0.0000	126.7887
Unmitigated	0.0260	0.1242	0.3128	1.3600e-003	0.1603	7.0000e-004	0.1610	0.0429	6.5000e-004	0.0435	0.0000	126.6351	126.6351	6.1400e-003	0.0000	126.7887

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	219.60	27.01	11.53	425,402	425,402
Total	219.60	27.01	11.53	425,402	425,402

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	8.80	8.80	8.80	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.617626	0.036451	0.176904	0.096837	0.011340	0.005282	0.018425	0.026503	0.001944	0.001632	0.005548	0.000800	0.000709

5.0 Energy Detail

Historical Energy Use: Y

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	28.3459	28.3459	1.1800e-003	2.4000e-004	28.4454
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.3459	28.3459	1.1800e-003	2.4000e-004	28.4454
NaturalGas Mitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
NaturalGas Unmitigated	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

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					
General Office Building	258618	1.3900e-003	0.0127	0.0107	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.8009	13.8009	2.6000e-004	2.5000e-004	13.8829
Total		**1.3900e-003**	**0.0127**	**0.0107**	**8.0000e-005**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**13.8009**	**13.8009**	**2.6000e-004**	**2.5000e-004**	**13.8829**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	28.3459	1.1800e-003	2.4000e-004	28.4454
Total		**28.3459**	**1.1800e-003**	**2.4000e-004**	**28.4454**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	172778	28.3459	1.1800e-003	2.4000e-004	28.4454
Total		**28.3459**	**1.1800e-003**	**2.4000e-004**	**28.4454**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	0.0461	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0461**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.9681	0.0639	1.5500e-003	9.0276
Unmitigated	6.9681	0.0639	1.5500e-003	9.0276

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	6.9681	0.0639	1.5500e-003	9.0276
Total		**6.9681**	**0.0639**	**1.5500e-003**	**9.0276**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.95152 / 1.19609	6.9681	0.0639	1.5500e-003	9.0276
Total		**6.9681**	**0.0639**	**1.5500e-003**	**9.0276**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e

	MT/yr			
Mitigated	1.0363	0.0612	0.0000	2.5673
Unmitigated	2.0725	0.1225	0.0000	5.1346

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	10.21	2.0725	0.1225	0.0000	5.1346
Total		**2.0725**	**0.1225**	**0.0000**	**5.1346**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	5.105	1.0363	0.0612	0.0000	2.5673
Total		**1.0363**	**0.0612**	**0.0000**	**2.5673**

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

11.0 Vegetation

Chick fil A Carlsbad

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	36.00	Space	0.32	14,400.00	0
Fast Food Restaurant w/o Drive Thru	3.43	1000sqft	0.08	3,427.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	517.31	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS

Land Use -

Construction Phase - 6 month construction schedule

Grading - Net export

Demolition -

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - Based on SANDAG trip lengths and traffic analysis

Area Coating - Rule 67.0.1 coatings

Energy Use - Title 24 as of 2019

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	23.00
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	5.00	45.00
tblConstructionPhase	PhaseEndDate	12/20/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	12/6/2021	12/31/2021
tblConstructionPhase	PhaseEndDate	7/14/2021	7/16/2021
tblConstructionPhase	PhaseEndDate	7/19/2021	8/31/2021
tblConstructionPhase	PhaseEndDate	12/13/2021	12/31/2021
tblConstructionPhase	PhaseStartDate	12/14/2021	12/1/2021
tblConstructionPhase	PhaseStartDate	7/20/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	7/16/2021	7/17/2021
tblConstructionPhase	PhaseStartDate	12/7/2021	11/1/2021
tblEnergyUse	T24E	8.23	7.35
tblEnergyUse	T24NG	35.92	35.56
tblGrading	AcresOfGrading	0.00	0.89
tblGrading	MaterialExported	0.00	2,290.00

tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	517.31
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	DV_TP	37.00	25.00
tblVehicleTrips	PB_TP	12.00	25.00
tblVehicleTrips	PR_TP	51.00	50.00
tblVehicleTrips	ST_TR	696.00	700.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	WD_TR	716.00	700.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0907	0.7394	0.7046	1.2900e-003	0.0295	0.0379	0.0674	0.0106	0.0353	0.0459	0.0000	113.8686	113.8686	0.0265	0.0000	114.5303
Maximum	**0.0907**	**0.7394**	**0.7046**	**1.2900e-003**	**0.0295**	**0.0379**	**0.0674**	**0.0106**	**0.0353**	**0.0459**	**0.0000**	**113.8686**	**113.8686**	**0.0265**	**0.0000**	**114.5303**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0907	0.7394	0.7046	1.2900e-003	0.0184	0.0379	0.0563	5.9900e-003	0.0353	0.0413	0.0000	113.8685	113.8685	0.0265	0.0000	114.5302
Maximum	**0.0907**	**0.7394**	**0.7046**	**1.2900e-003**	**0.0184**	**0.0379**	**0.0563**	**5.9900e-003**	**0.0353**	**0.0413**	**0.0000**	**113.8685**	**113.8685**	**0.0265**	**0.0000**	**114.5302**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.56**	**0.00**	**16.43**	**43.38**	**0.00**	**10.00**	**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	**7-1-2021**	**9-30-2021**	0.3222	0.3222
		Highest	0.3222	0.3222

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	63.4195	63.4195	1.8900e-003	8.3000e-004	63.7135
Mobile	0.4197	1.6141	3.4656	9.4400e-003	0.7527	8.5800e-003	0.7613	0.2016	8.0000e-003	0.2096	0.0000	872.9070	872.9070	0.0561	0.0000	874.3103

Waste						0.0000	0.0000		0.0000	0.0000	8.0202	0.0000	8.0202	0.4740	0.0000	19.8696
Water						0.0000	0.0000		0.0000	0.0000	0.3303	3.3542	3.6845	0.0341	8.3000e-004	4.7825
Total	**0.4388**	**1.6433**	**3.4905**	**9.6200e-003**	**0.7527**	**0.0108**	**0.7635**	**0.2016**	**0.0102**	**0.2118**	**8.3505**	**939.6815**	**948.0320**	**0.5661**	**1.6600e-003**	**962.6767**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	63.4184	63.4184	1.8900e-003	8.3000e-004	63.7123
Mobile	0.4189	1.6089	3.4469	9.3600e-003	0.7452	8.5100e-003	0.7537	0.1996	7.9400e-003	0.2075	0.0000	865.5276	865.5276	0.0558	0.0000	866.9227
Waste						0.0000	0.0000		0.0000	0.0000	4.0101	0.0000	4.0101	0.2370	0.0000	9.9348
Water						0.0000	0.0000		0.0000	0.0000	0.2642	2.7075	2.9717	0.0273	6.6000e-004	3.8502
Total	**0.4379**	**1.6381**	**3.4719**	**9.5400e-003**	**0.7452**	**0.0107**	**0.7560**	**0.1996**	**0.0102**	**0.2097**	**4.2743**	**931.6541**	**935.9284**	**0.3219**	**1.4900e-003**	**944.4208**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.20**	**0.32**	**0.53**	**0.83**	**1.00**	**0.65**	**0.99**	**1.00**	**0.59**	**0.98**	**48.81**	**0.85**	**1.28**	**43.13**	**10.24**	**1.90**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2021	7/16/2021	5	12	
2	Grading	Grading	7/17/2021	8/31/2021	5	32	

3	Building Construction	Building Construction	9/1/2021	12/31/2021	5	88	
4	Paving	Paving	11/1/2021	12/31/2021	5	45	
5	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.89

Acres of Paving: 0.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,141; Non-Residential Outdoor: 1,714; Striped Parking Area: 864

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	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
Demolition	4	10.00	0.00	50.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	4	10.00	0.00	286.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4700e-003	0.0000	5.4700e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0435	0.0454	7.0000e-005		2.4400e-003	2.4400e-003		2.3300e-003	2.3300e-003	0.0000	6.2456	6.2456	1.1600e-003	0.0000	6.2747
Total	**4.7800e-003**	**0.0435**	**0.0454**	**7.0000e-005**	**5.4700e-003**	**2.4400e-003**	**7.9100e-003**	**8.3000e-004**	**2.3300e-003**	**3.1600e-003**	**0.0000**	**6.2456**	**6.2456**	**1.1600e-003**	**0.0000**	**6.2747**

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	1.9000e-004	6.5300e-003	1.6100e-003	2.0000e-005	4.3000e-004	2.0000e-005	4.5000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9041	1.9041	1.7000e-004	0.0000	1.9084

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5000e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4203	0.4203	1.0000e-005	0.0000	0.4206
Total	**4.0000e-004**	**6.6800e-003**	**3.1100e-003**	**2.0000e-005**	**9.1000e-004**	**2.0000e-005**	**9.3000e-004**	**2.5000e-004**	**2.0000e-005**	**2.7000e-004**	**0.0000**	**2.3244**	**2.3244**	**1.8000e-004**	**0.0000**	**2.3290**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1300e-003	0.0000	2.1300e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0435	0.0454	7.0000e-005		2.4400e-003	2.4400e-003		2.3300e-003	2.3300e-003	0.0000	6.2456	6.2456	1.1600e-003	0.0000	6.2747
Total	**4.7800e-003**	**0.0435**	**0.0454**	**7.0000e-005**	**2.1300e-003**	**2.4400e-003**	**4.5700e-003**	**3.2000e-004**	**2.3300e-003**	**2.6500e-003**	**0.0000**	**6.2456**	**6.2456**	**1.1600e-003**	**0.0000**	**6.2747**

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	1.9000e-004	6.5300e-003	1.6100e-003	2.0000e-005	4.3000e-004	2.0000e-005	4.5000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.9041	1.9041	1.7000e-004	0.0000	1.9084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5000e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4203	0.4203	1.0000e-005	0.0000	0.4206
Total	**4.0000e-004**	**6.6800e-003**	**3.1100e-003**	**2.0000e-005**	**9.1000e-004**	**2.0000e-005**	**9.3000e-004**	**2.5000e-004**	**2.0000e-005**	**2.7000e-004**	**0.0000**	**2.3244**	**2.3244**	**1.8000e-004**	**0.0000**	**2.3290**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0127	0.0000	0.0127	6.7000e-003	0.0000	6.7000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1161	0.1211	1.9000e-004		6.5200e-003	6.5200e-003		6.2200e-003	6.2200e-003	0.0000	16.6550	16.6550	3.1000e-003	0.0000	16.7326
Total	**0.0127**	**0.1161**	**0.1211**	**1.9000e-004**	**0.0127**	**6.5200e-003**	**0.0192**	**6.7000e-003**	**6.2200e-003**	**0.0129**	**0.0000**	**16.6550**	**16.6550**	**3.1000e-003**	**0.0000**	**16.7326**

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	1.0700e-003	0.0374	9.2100e-003	1.1000e-004	2.4500e-003	1.1000e-004	2.5600e-003	6.7000e-004	1.1000e-004	7.8000e-004	0.0000	10.8912	10.8912	9.8000e-004	0.0000	10.9158
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	4.0000e-004	4.0000e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1208	1.1208	3.0000e-005	0.0000	1.1216
Total	**1.6300e-003**	**0.0378**	**0.0132**	**1.2000e-004**	**3.7300e-003**	**1.2000e-004**	**3.8500e-003**	**1.0100e-003**	**1.2000e-004**	**1.1300e-003**	**0.0000**	**12.0120**	**12.0120**	**1.0100e-003**	**0.0000**	**12.0374**

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					4.9400e-003	0.0000	4.9400e-003	2.6100e-003	0.0000	2.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1161	0.1211	1.9000e-004		6.5200e-003	6.5200e-003		6.2200e-003	6.2200e-003	0.0000	16.6549	16.6549	3.1000e-003	0.0000	16.7325
Total	**0.0127**	**0.1161**	**0.1211**	**1.9000e-004**	**4.9400e-003**	**6.5200e-003**	**0.0115**	**2.6100e-003**	**6.2200e-003**	**8.8300e-003**	**0.0000**	**16.6549**	**16.6549**	**3.1000e-003**	**0.0000**	**16.7325**

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	1.0700e-003	0.0374	9.2100e-003	1.1000e-004	2.4500e-003	1.1000e-004	2.5600e-003	6.7000e-004	1.1000e-004	7.8000e-004	0.0000	10.8912	10.8912	9.8000e-004	0.0000	10.9158
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	4.0000e-004	4.0000e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1208	1.1208	3.0000e-005	0.0000	1.1216
Total	**1.6300e-003**	**0.0378**	**0.0132**	**1.2000e-004**	**3.7300e-003**	**1.2000e-004**	**3.8500e-003**	**1.0100e-003**	**1.2000e-004**	**1.1300e-003**	**0.0000**	**12.0120**	**12.0120**	**1.0100e-003**	**0.0000**	**12.0374**

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	0.0341	0.3513	0.3196	5.0000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	44.0361	44.0361	0.0142	0.0000	44.3922

Total	**0.0341**	**0.3513**	**0.3196**	**5.0000e-004**		**0.0197**	**0.0197**		**0.0181**	**0.0181**	**0.0000**	**44.0361**	**44.0361**	**0.0142**	**0.0000**	**44.3922**

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	4.1000e-004	0.0136	3.6200e-003	4.0000e-005	8.8000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	3.4510	3.4510	2.6000e-004	0.0000	3.4574
Worker	1.0700e-003	7.6000e-004	7.6900e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.6000e-004	2.0000e-005	6.7000e-004	0.0000	2.1576	2.1576	6.0000e-005	0.0000	2.1592
Total	**1.4800e-003**	**0.0143**	**0.0113**	**6.0000e-005**	**3.3500e-003**	**5.0000e-005**	**3.3900e-003**	**9.1000e-004**	**5.0000e-005**	**9.5000e-004**	**0.0000**	**5.6086**	**5.6086**	**3.2000e-004**	**0.0000**	**5.6166**

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	0.0341	0.3513	0.3196	5.0000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	44.0361	44.0361	0.0142	0.0000	44.3921
Total	**0.0341**	**0.3513**	**0.3196**	**5.0000e-004**		**0.0197**	**0.0197**		**0.0181**	**0.0181**	**0.0000**	**44.0361**	**44.0361**	**0.0142**	**0.0000**	**44.3921**

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	4.1000e-004	0.0136	3.6200e-003	4.0000e-005	8.8000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	3.4510	3.4510	2.6000e-004	0.0000	3.4574
Worker	1.0700e-003	7.6000e-004	7.6900e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.6000e-004	2.0000e-005	6.7000e-004	0.0000	2.1576	2.1576	6.0000e-005	0.0000	2.1592
Total	**1.4800e-003**	**0.0143**	**0.0113**	**6.0000e-005**	**3.3500e-003**	**5.0000e-005**	**3.3900e-003**	**9.1000e-004**	**5.0000e-005**	**9.5000e-004**	**0.0000**	**5.6086**	**5.6086**	**3.2000e-004**	**0.0000**	**5.6166**

3.5 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	0.0162	0.1512	0.1595	2.5000e-004		7.9500e-003	7.9500e-003		7.3900e-003	7.3900e-003	0.0000	21.1331	21.1331	6.1600e-003	0.0000	21.2869
Paving	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.1512**	**0.1595**	**2.5000e-004**		**7.9500e-003**	**7.9500e-003**		**7.3900e-003**	**7.3900e-003**	**0.0000**	**21.1331**	**21.1331**	**6.1600e-003**	**0.0000**	**21.2869**

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	1.4100e-003	1.0000e-003	0.0101	3.0000e-005	3.2500e-003	2.0000e-005	3.2700e-003	8.6000e-004	2.0000e-005	8.8000e-004	0.0000	2.8371	2.8371	8.0000e-005	0.0000	2.8392
Total	**1.4100e-003**	**1.0000e-003**	**0.0101**	**3.0000e-005**	**3.2500e-003**	**2.0000e-005**	**3.2700e-003**	**8.6000e-004**	**2.0000e-005**	**8.8000e-004**	**0.0000**	**2.8371**	**2.8371**	**8.0000e-005**	**0.0000**	**2.8392**

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	0.0162	0.1512	0.1595	2.5000e-004		7.9500e-003	7.9500e-003		7.3900e-003	7.3900e-003	0.0000	21.1330	21.1330	6.1600e-003	0.0000	21.2869
Paving	4.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0167**	**0.1512**	**0.1595**	**2.5000e-004**		**7.9500e-003**	**7.9500e-003**		**7.3900e-003**	**7.3900e-003**	**0.0000**	**21.1330**	**21.1330**	**6.1600e-003**	**0.0000**	**21.2869**

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	1.4100e-003	1.0000e-003	0.0101	3.0000e-005	3.2500e-003	2.0000e-005	3.2700e-003	8.6000e-004	2.0000e-005	8.8000e-004	0.0000	2.8371	2.8371	8.0000e-005	0.0000	2.8392
Total	**1.4100e-003**	**1.0000e-003**	**0.0101**	**3.0000e-005**	**3.2500e-003**	**2.0000e-005**	**3.2700e-003**	**8.6000e-004**	**2.0000e-005**	**8.8000e-004**	**0.0000**	**2.8371**	**2.8371**	**8.0000e-005**	**0.0000**	**2.8392**

3.6 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	0.0149					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5200e-003	0.0176	0.0209	3.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0175**	**0.0176**	**0.0209**	**3.0000e-005**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0806	0.0806	0.0000	0.0000	0.0806
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0806**	**0.0806**	**0.0000**	**0.0000**	**0.0806**

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	0.0149					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5200e-003	0.0176	0.0209	3.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0175**	**0.0176**	**0.0209**	**3.0000e-005**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0806	0.0806	0.0000	0.0000	0.0806
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0806**	**0.0806**	**0.0000**	**0.0000**	**0.0806**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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	0.4189	1.6089	3.4469	9.3600e-003	0.7452	8.5100e-003	0.7537	0.1996	7.9400e-003	0.2075	0.0000	865.5276	865.5276	0.0558	0.0000	866.9227
Unmitigated	0.4197	1.6141	3.4656	9.4400e-003	0.7527	8.5800e-003	0.7613	0.2016	8.0000e-003	0.2096	0.0000	872.9070	872.9070	0.0561	0.0000	874.3103

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,398.90	2,398.90	0.00	1,997,444	1,977,470
Parking Lot	0.00	0.00	0.00		
Total	2,398.90	2,398.90	0.00	1,997,444	1,977,470

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive Thru	4.70	4.70	4.70	1.50	79.50	19.00	50	25	25
Parking Lot	4.70	4.70	4.70	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	31.5940	31.5940	1.2800e-003	2.4000e-004	31.6988
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	31.5951	31.5951	1.2800e-003	2.4000e-004	31.7000
NaturalGas Mitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
NaturalGas Unmitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129609	30.4125	1.2300e-003	2.4000e-004	30.5135
Parking Lot	5040	1.1826	5.0000e-005	1.0000e-005	1.1866
Total		**31.5951**	**1.2800e-003**	**2.5000e-004**	**31.7000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129607	30.4119	1.2300e-003	2.4000e-004	30.5129

Parking Lot	5037.5	1.1820	5.0000e-005	1.0000e-005	1.1860
Total		**31.5940**	**1.2800e-003**	**2.5000e-004**	**31.6988**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Unmitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004

Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	2.9717	0.0273	6.6000e-004	3.8502
Unmitigated	3.6845	0.0341	8.3000e-004	4.7825

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.04112 / 0.0664545	3.6845	0.0341	8.3000e-004	4.7825
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.6845**	**0.0341**	**8.3000e-004**	**4.7825**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.832897 / 0.0624008	2.9717	0.0273	6.6000e-004	3.8502
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.9717**	**0.0273**	**6.6000e-004**	**3.8502**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.0101	0.2370	0.0000	9.9348
Unmitigated	8.0202	0.4740	0.0000	19.8696

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	39.51	8.0202	0.4740	0.0000	19.8696
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.0202**	**0.4740**	**0.0000**	**19.8696**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	19.755	4.0101	0.2370	0.0000	9.9348
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.0101**	**0.2370**	**0.0000**	**9.9348**

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

11.0 Vegetation

Chick fil A Carlsbad - San Diego Air Basin, Annual

Chick fil A Carlsbad

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	36.00	Space	0.32	14,400.00	0
Fast Food Restaurant w/o Drive Thru	3.43	1000sqft	0.08	3,427.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	361.69	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Fleet Mix -

Area Coating - Rule 67.0.1 coatings

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	T24E	8.23	7.35
tblEnergyUse	T24NG	35.92	35.56
tblGrading	AcresOfGrading	0.50	0.00
tblLandUse	LandUseSquareFeet	3,430.00	3,427.00
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	720.49	361.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	DV_TP	37.00	25.00
tblVehicleTrips	PB_TP	12.00	25.00
tblVehicleTrips	PR_TP	51.00	50.00
tblVehicleTrips	ST_TR	696.00	700.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	WD_TR	716.00	700.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	53.9149	53.9149	1.5300e-003	7.7000e-004	54.1815
Mobile	0.2795	1.2015	2.3182	7.5600e-003	0.7530	5.4400e-003	0.7584	0.2016	5.0500e-003	0.2066	0.0000	705.2754	705.2754	0.0401	0.0000	706.2783
Waste						0.0000	0.0000		0.0000	0.0000	8.0202	0.0000	8.0202	0.4740	0.0000	19.8696
Water						0.0000	0.0000		0.0000	0.0000	0.3303	2.3452	2.6755	0.0340	8.2000e-004	3.7706
Total	**0.2986**	**1.2308**	**2.3432**	**7.7400e-003**	**0.7530**	**7.6600e-003**	**0.7607**	**0.2016**	**7.2700e-003**	**0.2088**	**8.3505**	**761.5362**	**769.8867**	**0.5497**	**1.5900e-003**	**784.1008**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	53.9141	53.9141	1.5300e-003	7.7000e-004	54.1807
Mobile	0.2789	1.1988	2.3053	7.5000e-003	0.7455	5.4000e-003	0.7509	0.1995	5.0100e-003	0.2046	0.0000	699.4109	699.4109	0.0399	0.0000	700.4075
Waste						0.0000	0.0000		0.0000	0.0000	4.0101	0.0000	4.0101	0.2370	0.0000	9.9348
Water						0.0000	0.0000		0.0000	0.0000	0.2642	1.8930	2.1572	0.0272	6.6000e-004	3.0333
Total	**0.2979**	**1.2280**	**2.3302**	**7.6800e-003**	**0.7455**	**7.6200e-003**	**0.7531**	**0.1995**	**7.2300e-003**	**0.2068**	**4.2743**	**755.2187**	**759.4930**	**0.3056**	**1.4300e-003**	**767.5571**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.21**	**0.22**	**0.55**	**0.78**	**1.00**	**0.52**	**1.00**	**1.00**	**0.55**	**0.98**	**48.81**	**0.83**	**1.35**	**44.40**	**10.06**	**2.11**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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	0.2789	1.1988	2.3053	7.5000e-003	0.7455	5.4000e-003	0.7509	0.1995	5.0100e-003	0.2046	0.0000	699.4109	699.4109	0.0399	0.0000	700.4075
Unmitigated	0.2795	1.2015	2.3182	7.5600e-003	0.7530	5.4400e-003	0.7584	0.2016	5.0500e-003	0.2066	0.0000	705.2754	705.2754	0.0401	0.0000	706.2783

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,401.00	2,401.00	0.00	1,999,193	1,979,201
Parking Lot	0.00	0.00	0.00		
Total	2,401.00	2,401.00	0.00	1,999,193	1,979,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Fast Food Restaurant w/o Drive Thru	4.70	4.70	4.70	1.50	79.50	19.00	50	25	25
Parking Lot	4.70	4.70	4.70	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.616428	0.037185	0.177402	0.097684	0.012090	0.005279	0.017663	0.025476	0.001931	0.001677	0.005617	0.000785	0.000782
Parking Lot	0.616428	0.037185	0.177402	0.097684	0.012090	0.005279	0.017663	0.025476	0.001931	0.001677	0.005617	0.000785	0.000782

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	22.0897	22.0897	9.2000e-004	1.8000e-004	22.1672
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.0905	22.0905	9.2000e-004	1.8000e-004	22.1680
NaturalGas Mitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
NaturalGas Unmitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129609	21.2637	8.8000e-004	1.8000e-004	21.3383
Parking Lot	5040	0.8269	3.0000e-005	1.0000e-005	0.8298

Total		**22.0905**	**9.1000e-004**	**1.9000e-004**	**22.1680**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129607	21.2632	8.8000e-004	1.8000e-004	21.3379
Parking Lot	5037.5	0.8265	3.0000e-005	1.0000e-005	0.8294
Total		**22.0897**	**9.1000e-004**	**1.9000e-004**	**22.1672**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Unmitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1572	0.0272	6.6000e-004	3.0333
Unmitigated	2.6755	0.0340	8.2000e-004	3.7706

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.04112 / 0.0664545	2.6755	0.0340	8.2000e-004	3.7706
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.6755**	**0.0340**	**8.2000e-004**	**3.7706**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.832897 / 0.0624008	2.1572	0.0272	6.6000e-004	3.0333
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1572**	**0.0272**	**6.6000e-004**	**3.0333**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.0101	0.2370	0.0000	9.9348
Unmitigated	8.0202	0.4740	0.0000	19.8696

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	39.51	8.0202	0.4740	0.0000	19.8696
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**8.0202**	**0.4740**	**0.0000**	**19.8696**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	19.755	4.0101	0.2370	0.0000	9.9348
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.0101**	**0.2370**	**0.0000**	**9.9348**

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

11.0 Vegetation

Chick fil A Carlsbad - San Diego Air Basin, Annual

Chick fil A Carlsbad

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	36.00	Space	0.32	14,400.00	0
Fast Food Restaurant w/o Drive Thru	3.43	1000sqft	0.08	3,427.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2035
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	361.69	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblEnergyUse	T24E	8.23	7.35
tblEnergyUse	T24NG	35.92	35.56

tblGrading	AcresOfGrading	0.50	0.00
tblLandUse	LandUseSquareFeet	3,430.00	3,427.00
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	720.49	361.69
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	DV_TP	37.00	25.00
tblVehicleTrips	PB_TP	12.00	25.00
tblVehicleTrips	PR_TP	51.00	50.00
tblVehicleTrips	ST_TR	696.00	700.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	WD_TR	716.00	700.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

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

Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	53.9149	53.9149	1.5300e-003	7.7000e-004	54.1815
Mobile	0.2314	1.1657	2.0263	7.1400e-003	0.7531	4.0100e-003	0.7571	0.2016	3.7200e-003	0.2053	0.0000	669.0204	669.0204	0.0375	0.0000	669.9582
Waste						0.0000	0.0000		0.0000	0.0000	8.0202	0.0000	8.0202	0.4740	0.0000	19.8696
Water						0.0000	0.0000		0.0000	0.0000	0.3303	2.3452	2.6755	0.0340	8.2000e-004	3.7706
Total	**0.2504**	**1.1949**	**2.0513**	**7.3200e-003**	**0.7531**	**6.2300e-003**	**0.7594**	**0.2016**	**5.9400e-003**	**0.2076**	**8.3505**	**725.2812**	**733.6317**	**0.5470**	**1.5900e-003**	**747.7807**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Energy	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	53.9141	53.9141	1.5300e-003	7.7000e-004	54.1807
Mobile	0.2308	1.1632	2.0149	7.0800e-003	0.7456	3.9800e-003	0.7496	0.1996	3.7000e-003	0.2033	0.0000	663.5046	663.5046	0.0373	0.0000	664.4364
Waste						0.0000	0.0000		0.0000	0.0000	4.0101	0.0000	4.0101	0.2370	0.0000	9.9348
Water						0.0000	0.0000		0.0000	0.0000	0.2642	1.8930	2.1572	0.0272	6.6000e-004	3.0333
Total	**0.2498**	**1.1925**	**2.0398**	**7.2600e-003**	**0.7456**	**6.2000e-003**	**0.7518**	**0.1996**	**5.9200e-003**	**0.2055**	**4.2743**	**719.3123**	**723.5867**	**0.3030**	**1.4300e-003**	**731.5860**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.23**	**0.20**	**0.56**	**0.82**	**1.00**	**0.48**	**1.00**	**1.00**	**0.34**	**0.99**	**48.81**	**0.82**	**1.37**	**44.61**	**10.06**	**2.17**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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	0.2308	1.1632	2.0149	7.0800e-003	0.7456	3.9800e-003	0.7496	0.1996	3.7000e-003	0.2033	0.0000	663.5046	663.5046	0.0373	0.0000	664.4364
Unmitigated	0.2314	1.1657	2.0263	7.1400e-003	0.7531	4.0100e-003	0.7571	0.2016	3.7200e-003	0.2053	0.0000	669.0204	669.0204	0.0375	0.0000	669.9582

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	2,401.00	2,401.00	0.00	1,999,193	1,979,201
Parking Lot	0.00	0.00	0.00		
Total	2,401.00	2,401.00	0.00	1,999,193	1,979,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant w/o Drive Thru	4.70	4.70	4.70	1.50	79.50	19.00	50	25	25
Parking Lot	4.70	4.70	4.70	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

Fast Food Restaurant w/o Drive Thru	0.617626	0.036451	0.176904	0.096837	0.011340	0.005282	0.018425	0.026503	0.001944	0.001632	0.005548	0.000800	0.000709
Parking Lot	0.617626	0.036451	0.176904	0.096837	0.011340	0.005282	0.018425	0.026503	0.001944	0.001632	0.005548	0.000800	0.000709

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	22.0897	22.0897	9.2000e-004	1.8000e-004	22.1672
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.0905	22.0905	9.2000e-004	1.8000e-004	22.1680
NaturalGas Mitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
NaturalGas Unmitigated	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135

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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	596367	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8244	31.8244	6.1000e-004	5.8000e-004	32.0135
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
Total		**3.2200e-003**	**0.0292**	**0.0246**	**1.8000e-004**		**2.2200e-003**	**2.2200e-003**		**2.2200e-003**	**2.2200e-003**	**0.0000**	**31.8244**	**31.8244**	**6.1000e-004**	**5.8000e-004**	**32.0135**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129609	21.2637	8.8000e-004	1.8000e-004	21.3383
Parking Lot	5040	0.8269	3.0000e-005	1.0000e-005	0.8298
Total		**22.0905**	**9.1000e-004**	**1.9000e-004**	**22.1680**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	129607	21.2632	8.8000e-004	1.8000e-004	21.3379
Parking Lot	5037.5	0.8265	3.0000e-005	1.0000e-005	0.8294
Total		**22.0897**	**9.1000e-004**	**1.9000e-004**	**22.1672**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Unmitigated	0.0158	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004

6.2 Area by SubCategory

Unmitigated

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

SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.5000e-004
Total	**0.0158**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**0.0000**	**7.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1572	0.0272	6.6000e-004	3.0333
Unmitigated	2.6755	0.0340	8.2000e-004	3.7706

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	1.04112 / 0.0664545	2.6755	0.0340	8.2000e-004	3.7706
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.6755**	**0.0340**	**8.2000e-004**	**3.7706**

Mitigated

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

Fast Food Restaurant w/o Drive Thru	0.832897 / 0.0624008	2.1572	0.0272	6.6000e-004	3.0333
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1572**	**0.0272**	**6.6000e-004**	**3.0333**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.0101	0.2370	0.0000	9.9348
Unmitigated	8.0202	0.4740	0.0000	19.8696

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	39.51	8.0202	0.4740	0.0000	19.8696
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**8.0202**	**0.4740**	**0.0000**	**19.8696**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	19.755	4.0101	0.2370	0.0000	9.9348
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.0101**	**0.2370**	**0.0000**	**9.9348**

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

11.0 Vegetation