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ARANTINE HILLS SPECIFIC PLAN
CLIMATE CHANGE ANALYSIS
CITY OF CORONA, CALIFORNIA

May 13, 2011

JN:06896-07
AE:HQ

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

The purpose of this climate change analysis is to evaluate the potential climate change impacts associated with the development (i.e. construction and operations) of the proposed project.

1.2 Site Location

The project site is generally located south of Eagle Glen Parkway and west of the I-15 Freeway in the City of Corona. Exhibit 1-A illustrates the location of the project site within the study area.

1.3 Project Description

The proposed project is planned to be developed in two (2) phases. Exhibit 1-B illustrates the project land use plan and Exhibit 1-C illustrates the project phasing plan. This land use plan is subject to refinement and revision, based on planning, engineering, and environmental considerations.

Phase 1 of the project, which will be completed in 2014, consists of the following land uses:

- 310 single-family detached dwelling units
- 597 multi-family attached dwelling units
- 3 acres of passive park
- 11 acres of active park
- 59,000 square feet of general office use
- 230,900 square feet of business park use
- 59,000 square feet of specialty retail use

Phase 2 (remainder of the project), which will be completed in 2019, consists of the following land uses:

- 239 single-family detached dwelling units
- 475 multi-family attached dwelling units
- 1 acre of passive park
- 396,400 square feet of shopping center use

EXHIBIT 1-A

REGIONAL AND PROJECT LOCATION

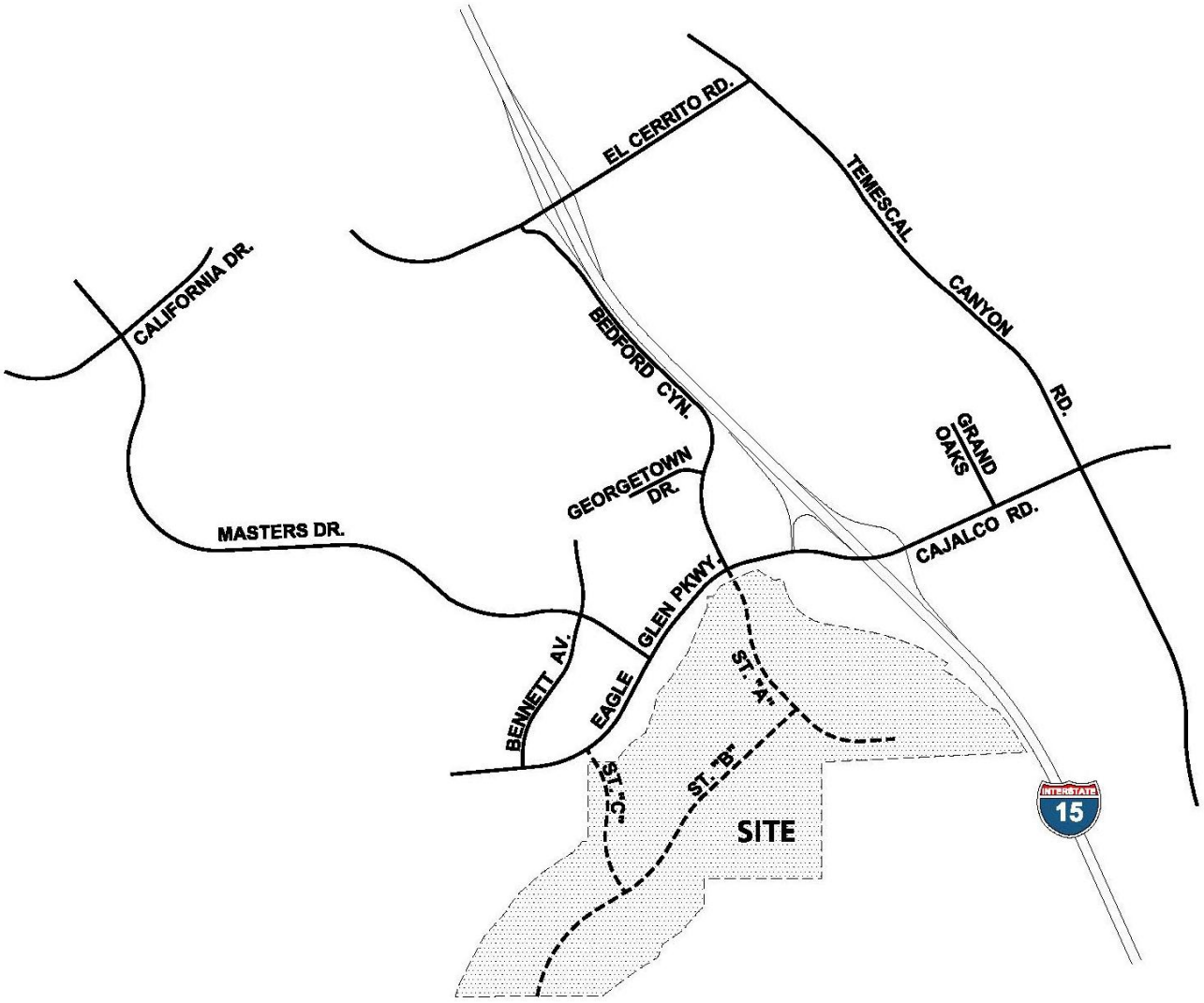


EXHIBIT 1-B

LAND USE PLAN

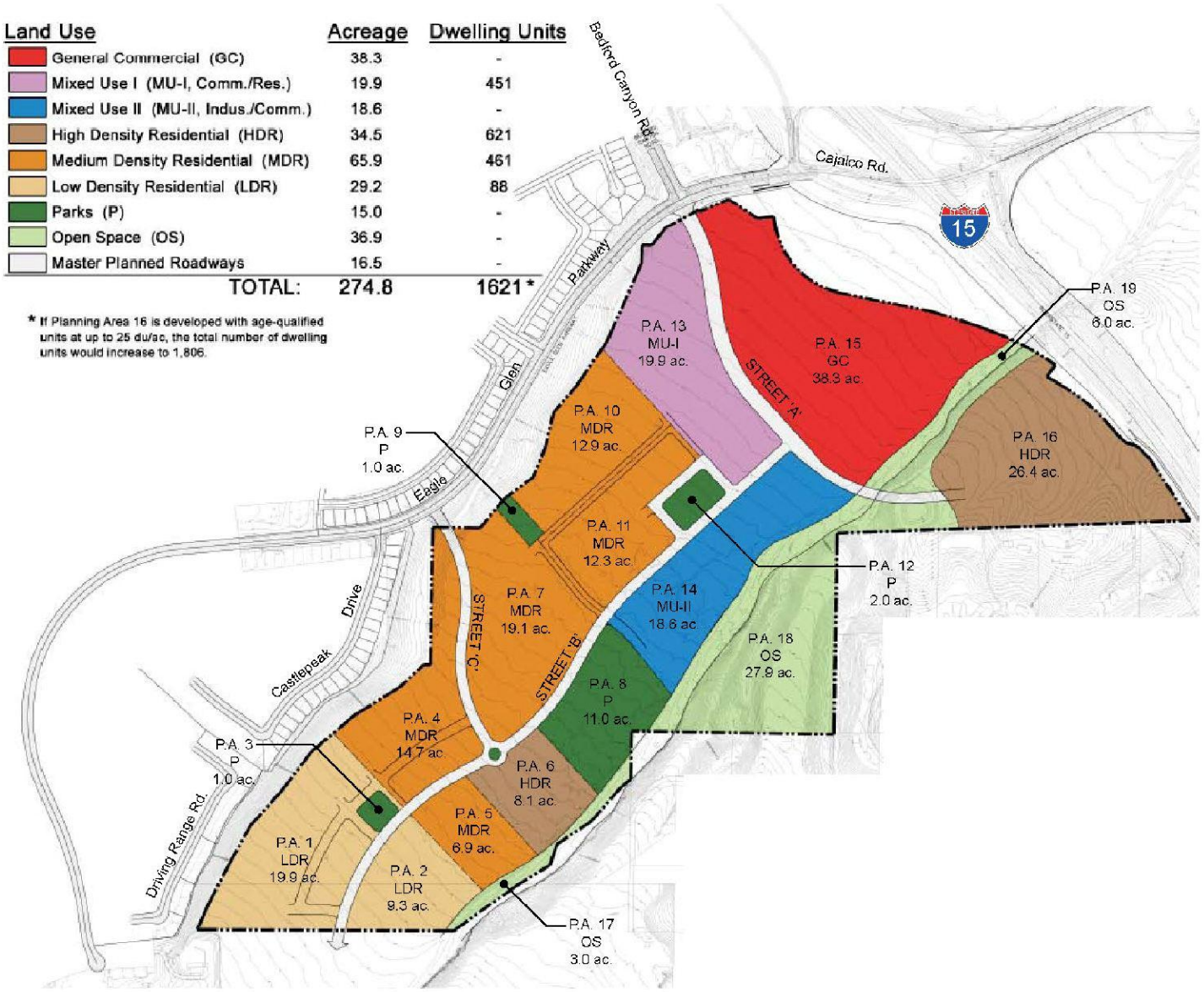
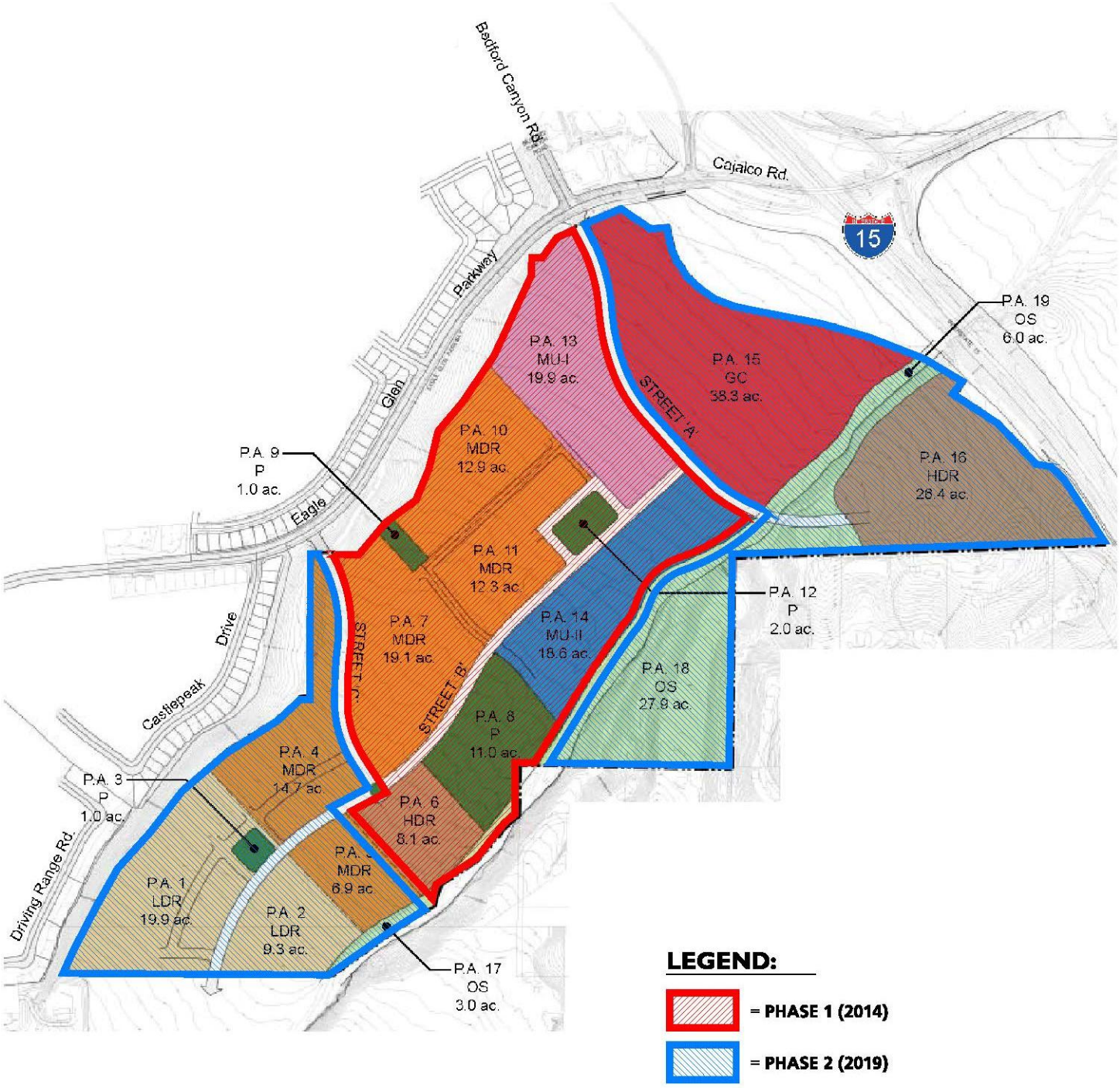


EXHIBIT 1-C

LAND USE PHASING PLAN



1.4 Summary of Findings

Results of the analysis indicate that the Project would generate GHG emission that may have a significant impact on the environment. However, the Project is consistent with, or otherwise not in conflict with (1) recommended measures and actions in the California Air Resources Board (CARB) December 2008 Scoping Plan (CARB Scoping Plan) setting forth strategies and measures to implement in order to achieve the GHG reductions goals set forth in the Global Warming Solutions Act of 2006 (AB 32); and (2) the GHG emission reduction strategies set forth in the 2006 Climate Action Team (CAT) Report, prepared in response to Executive Order S-3-05, which established total GHG emission targets for the State.

The Project will result in approximately 46,512.67 MT/yr CO2e and 6.83 MT CO2e/Service Population (SP)/Yr prior to implementation of the recommended mitigation measures; the proposed project would therefore exceed the threshold of 6.6 MT CO2e/SP/Yr prior to mitigation. After mitigation, the project will result in approximately 44,140.03 MT/yr CO2e and 6.48 MT CO2e/SP/Yr. As such, the Project GHG emissions are not cumulatively considerable with implementation of the following mitigation measures.

1.5 Operational Activity Recommended Mitigation Measures

MM GCC-1

In order to reduce Project-related air pollutant and greenhouse gas (GHG) emissions, and promote sustainability through conservation of energy and other natural resources, building and site plan designs shall ensure that the Project energy efficiencies surpass applicable 2008 California Title 24, Part 6 Energy Efficiency Standards by a minimum of 20 percent. Verification of increased energy efficiencies shall be shall be documented in Title 24 Compliance Reports provided by the Applicant, and reviewed and approved by the City prior to the issuance of the first building permit. Any combination of the following design features may be used to fulfill this mitigation measure provided such that the total increase in efficiency meets or exceeds 20 percent:

- Buildings shall exceed California Title 24 Energy Efficiency performance standards for water heating and space heating and cooling, as deemed acceptable by the City of Corona;

- Increase in insulation such that heat transfer and thermal bridging is minimized;

- Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption;
- Incorporate dual-paned or other energy efficient windows;

- Incorporate energy efficient space heating and cooling equipment;

- Interior and exterior energy efficient lighting which exceeds the California Title 24 Energy Efficiency performance standards shall be installed, as deemed acceptable by the City of Corona. Automatic devices to turn off lights when they are not needed shall be implemented.

- To the extent that they are compatible with landscaping guidelines established by the City of Corona, shade producing trees, particularly those that shade paved surfaces such as streets and parking lots and buildings shall be planted at the Project site.

- Paint and surface color palette for the Project shall emphasize light and off-white colors which will reflect heat away from the buildings.

- All buildings shall be designed to accommodate renewable energy sources, such as photovoltaic solar electricity systems, appropriate to their architectural design.

MM GCC-2

To reduce energy demand associated with potable water conveyance, the Project shall implement the following:

  - Landscaping palette emphasizing drought tolerant plants;
  - Use of water-efficient irrigation techniques;
  - U.S. EPA Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and water-conserving shower heads.

MM GCC-3

The project will recycle and/or salvage non-hazardous construction and demolition waste, and develop and implement a construction waste management plan;

MM GCC-4

The project will facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills by providing easily accessible areas that serve each building and are dedicated to the collection and storage of paper, cardboard, glass, plastics, and metals.

1.6 Design and Operational Programs

In addition to the operational activity mitigation measures listed above, the Project incorporates the following physical attributes and operational programs that will act to generally reduce operational-source pollutant emissions including GHG emissions measures identified below will also act to control and reduce emissions:

- The primary goal of the trails and bikeway plan is to provide alternatives to vehicle travel by providing other transportation options. These alternatives modes of transportation are intended to reduce vehicle emissions, clear air and provide for a healthier environment.

- The Specific Plan considers a variety of alternative transportation options including walking and biking. Exhibit 1-D, Pedestrian Circulation and Exhibit 1-E, Bicycle Circulation highlight the primary alternative transportation routes within the Specific Plan Area.

Additionally, the Arantine Hills Specific Plan includes *Sustainable Design Strategies* as follows:

Site Planning

A. Provide physical linkages between land uses that promote walking and bicycling, and provide alternatives to automobile use.

B. Encourage compact development that concentrates residential areas close to other land uses such as parks, retail and employment centers.

C. Include a range of housing types and/or densities within Arantine Hills.

D. Create an interconnected street network within the Specific Plan area that facilitates movement of vehicles, cyclists and pedestrians.

E. Incorporate “green” practices in developing buildings and infrastructure.

F. Encourage design of landscape areas that capture and direct stormwater runoff, particularly in open space, parks and trails.

G. Stabilize slopes to limit erosion as part of the Stormwater Management Plan and erosion control plan.

H. Minimize the amount of paved areas for roads, parking and patios, particularly in residential areas where feasible, or consider using porous or permeable pavement.

Energy Efficiency

Most buildings can reach energy efficiency levels that exceed California Title 24 standards, yet most only strive to meet the standard. It is reasonable to strive for energy reduction in excess of that required by Title 24 standards. Where feasible and appropriate, the following strategies are encouraged, but not required:

A. Passive design strategies can dramatically affect building energy performance. These measures include building shape and orientation, passive solar design, and the use of natural lighting.

B. Develop strategies to provide natural lighting to reduce reliance on artificial lighting.

C. Incorporate the use of Low-E windows or use EnergyStar windows.

D. Install high-efficiency lighting systems with advanced lighting controls. For non-residential buildings, include motion sensors tied to dimmable lighting controls. Task lighting reduces general overhead light levels.

E. Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider utilizing light colors for roofing and wall finish materials; install high R-value wall and ceiling insulation.

F. Individual developments within Arantine Hills are encouraged to implement some of the strategies of the EnergyStar program, which is an energy performance rating system developed by the U.S. Department of Energy and the Environmental Protection Agency. The program certifies products and buildings that meet strict energy-efficiency guidelines. Involvement in the EnergyStar program will be completely optional at the discretion of each individual developer/builder.

G. For retail, commercial, office, research and development, and light industrial uses, promote the use of light colored roofing with a high solar reflectance in order to reduce the heat island effect from roofs.

H. In retail, commercial and office developments, provide a limited number of preferred parking spaces for hybrid vehicles, fuel cell vehicles, electric vehicles and other fuel efficient vehicles.

Materials Efficiency

A. Select sustainable construction materials and products by evaluating characteristics such as reused and recycled content, zero or low off gassing of harmful air emissions, zero or low toxicity, sustainably harvested materials, high recyclability, durability, longevity, and local production. Such products promote resource conservation and efficiency. Using recycled-content products also helps develop markets for recycled materials that are being diverted from California's landfills, as mandated by the Integrated Waste Management Act.

B. Encourage the use of low VOC paints and wallpapers.

C. Encourage the use of low VOC Green Label carpet.

D. Use dimensional planning and other material efficiency strategies. These strategies reduce the amount of building materials needed and cut construction costs. For example, consider designing rooms on four foot multiples to conform to standard-sized wallboard and plywood sheets.

E. Consider using recycle base, crushed concrete base, recycle content asphalt, shredded tires in base and asphalt in roads, parking areas and drive aisles, if feasible and economically viable. Re-using materials keeps materials out of landfills and costs less.

F. Design with adequate space to facilitate recycling collection and to incorporate a solid waste management program that prevents waste generation.

G. Establish a construction waste recycling program with a local waste management company, with a goal of recycling no less than 50% of the construction waste generated by construction of the Arantine Hills community. Excavated soil and land-clearing debris does not contribute to this requirement.

H. The waste disposal company shall be responsible for providing each home with recycle bin(s) to facilitate recycling. The bin(s) should be portable and easily moved.

I. Encourage the use of building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project.

J. Encourage the use of rapidly renewable building materials and products (made from plants that are typically harvested within a ten-year cycle or shorter) into new homes. Examples of materials that could achieve this goal include, but are not limited to, bamboo, wool, cotton insulation, agrifiber, linoleum, wheatboard, strawboard and cork.

Water Efficiency

A. Minimize wastewater by using ultra low-flush toilets, low-flow shower heads and other water conserving fixtures.

B. Use recirculating systems for centralized hot water distribution.

C. Promote the use of “tank-less” water heaters for residential, mixed-use, retail, commercial and office development within the Arantine Hills community.

D. Use a smart irrigation controller which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions for all landscaped areas.

E. Use micro-irrigation (which excludes sprinklers and high-pressure sprayers) to supply water in non-turf areas where applicable.

F. Use state-of-the-art irrigation controllers and self-closing nozzles on hoses.

G. Use recycled water to irrigate landscape areas throughout the project. The non-potable irrigation system shall be designed to meet all applicable standards of the California Regional Water Quality Control Board, California Department of Health, Riverside County Health Department, City of Corona Department of Water and Power, and Corona Municipal Code.

H. Use separate valves for separate water-use planting areas, so that plants with similar water needs are irrigated by the same valve.

Occupant Health and Safety

A. Choose construction materials and interior finish products with zero or low emissions to improve indoor air quality.

B. Provide adequate ventilation and a high-efficiency, in-duct filtration system for commercial, office, research and development, and light industrial uses. Heating and cooling systems that ensure adequate ventilation and proper filtration can have a dramatic and positive impact on indoor air quality.

C. Prevent indoor microbial contamination through selection of materials resistant to microbial growth.

D. Provide effective drainage from the roof and surrounding landscape.

E. Install adequate ventilation in bathrooms.

F. Design non-residential building systems to control humidity.

G. Establish criteria for the delivery and storage of absorptive materials, and the ventilation of spaces once the materials are installed to prevent mold.

Landscape Design

A. Use low or medium water use and native plant materials where appropriate. Minimize turf areas throughout the community in order to promote water conservation. Limit the use of turf to areas which experience high functional use and are needed to accommodate outdoor activities such as sports, picnicking, etc. These areas could include parks, sports fields and other play areas. Only use warm-season turf varieties which are suited to the climate.

B. Provide plant materials that are well suited to the solar orientation and shading of homes.

C. Group plants according to water use, slope aspect and sun/shade requirements. Irrigate each hydrozone on a separate valve using high-efficiency irrigation techniques.

D. Use organic wood or shredded bark mulch and soil amendments to retain soil moisture.

E. Incorporate locally native vegetation into the plant palette for Arantine Hills.

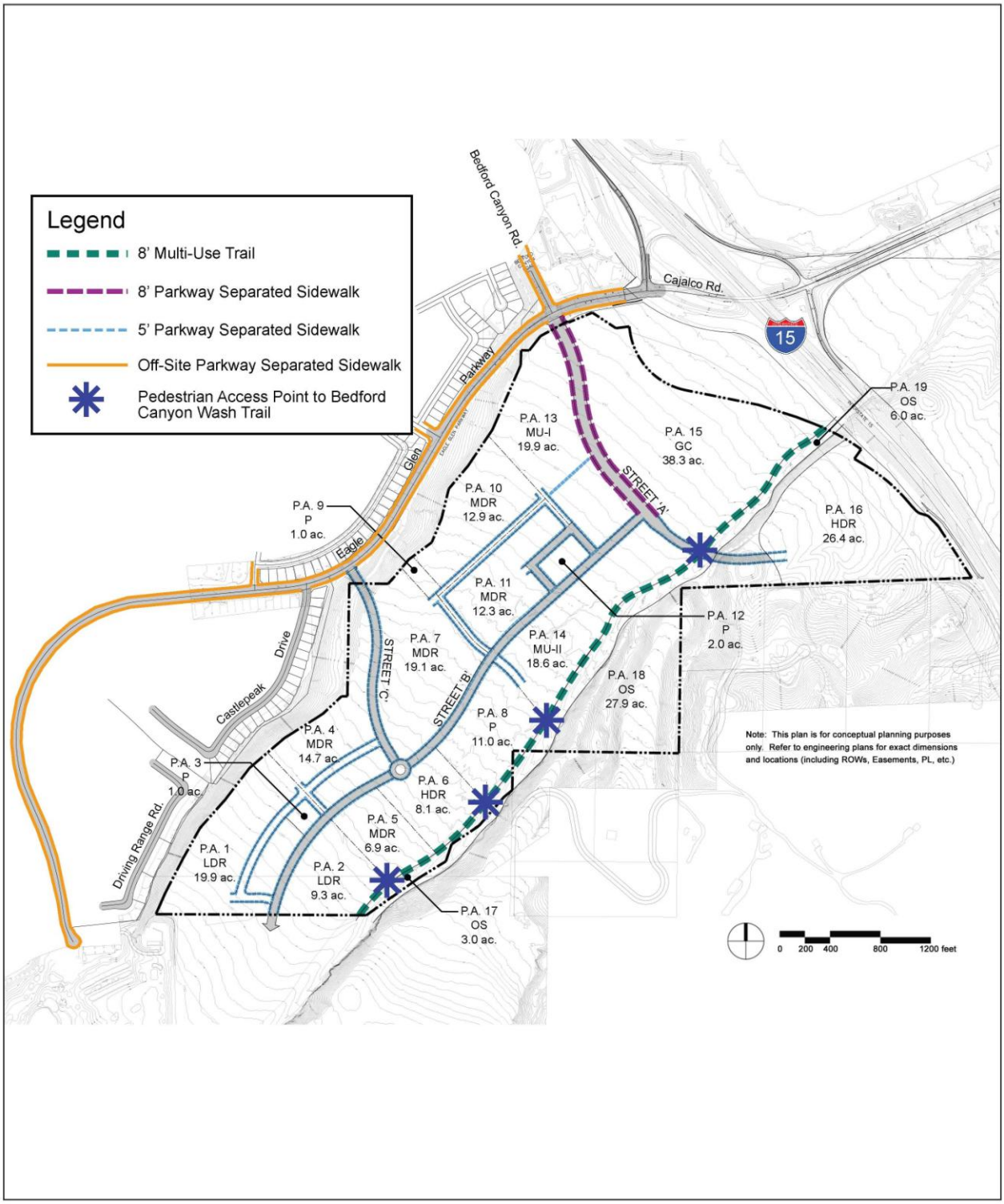
F. Encourage the use of colored hardscape materials to reduce glare and/or reflect heat in outdoor plazas and gathering areas.

G. Use low-growing, low to medium water use plant material in parkways instead of turf.

H. Provide shade trees in paved areas and adjacent to buildings in order to increase natural cooling and conserve energy.

EXHIBIT 1-D

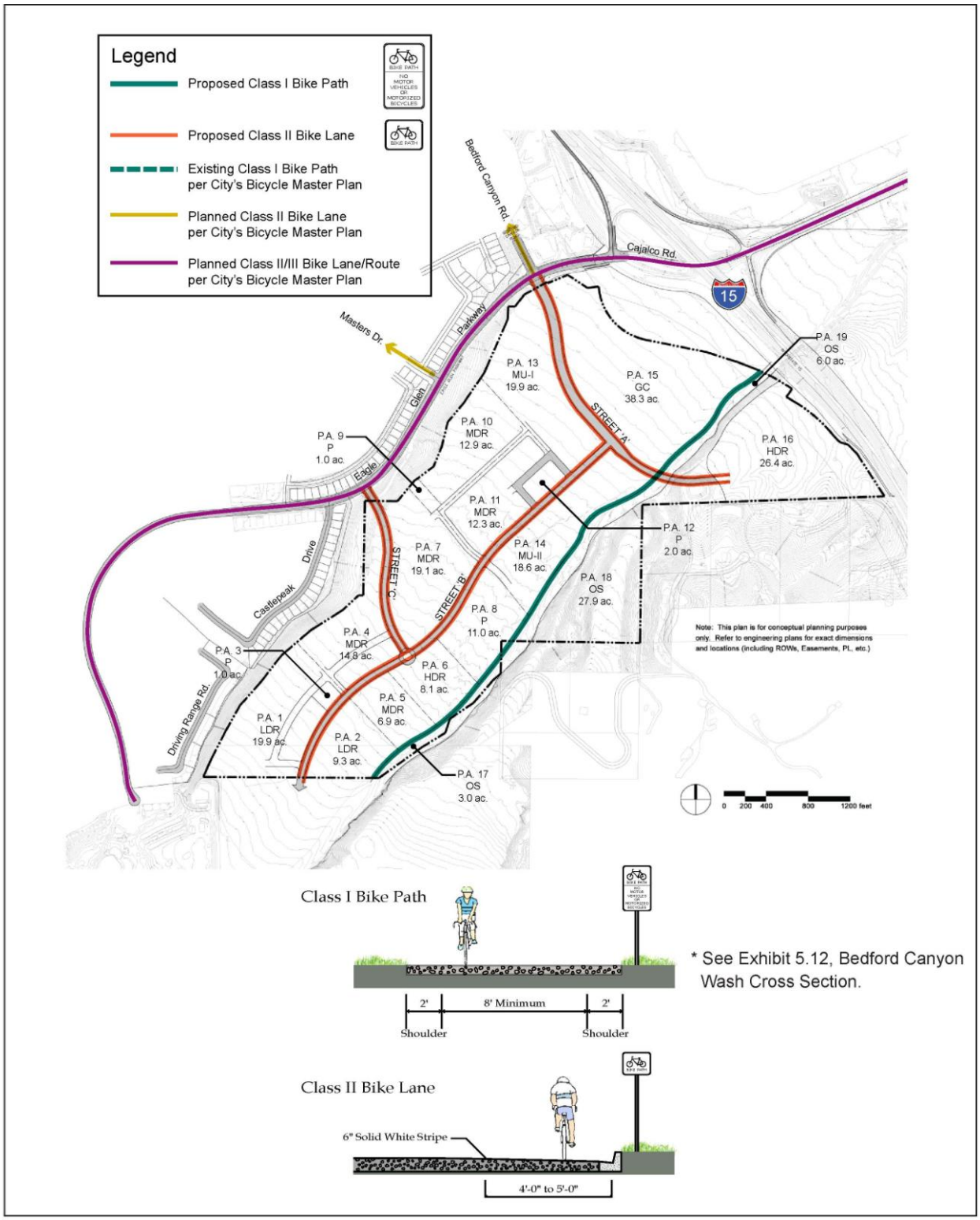
PEDESTRIAN CIRCULATION



Source: Arantine Hills Specific Plan

EXHIBIT 1-E

BICYCLE CIRCULATION



Source: Arantine Hills Specific Plan

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2.0 GLOBAL CLIMATE CHANGE ANALYSIS

2.1 Introduction to Global Climate Change

Global Climate Change (GCC) is simply defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial issues in the United States, and much debate exists within the scientific community whether or not global climate change is occurring naturally or as a result of human activity. Some data suggests that global climate change has occurred in the past over the course of thousands or millions of years. These climate changes occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift presently taking place is occurring at a quicker rate and magnitude. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the proposed project may participate in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this section will evaluate the potential for the proposed project to have a significant effect upon California's environment as a result of its potential contribution to the greenhouse effect.

2.2 Greenhouse Gas Emissions Inventories

Global

Worldwide anthropogenic (man-made) GHG emissions are tracked for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions for Annex I nations are available through 2007. Man-made GHG emissions for Non-Annex I nations are available through 2005. The sum of these emissions totaled approximately

42,133 MMTCO2e.[1] It should be noted that global emissions inventory data are not all from the same year and may vary depending on the source of the emissions inventory data.[2] Emissions from the top five countries and the European Union accounted for approximately 55 percent of the total global GHG emissions, according to the most recently available data (see Table 2-1, Top GHG Producer Countries and the European Union). The GHG emissions in more recent years may differ from the inventories presented in Table 2-1; however, the data is representative of currently available inventory data.

United States

As noted in Table 2-1, the United States was the number two producer of GHG emissions. The primary greenhouse gas emitted by human activities in the United States was CO2, representing approximately 84 percent of total greenhouse gas emissions.38 Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 80 percent of the GHG emissions.[3]

TABLE 2-1

TOP GHG PRODUCER COUNTRIES AND THE EUROPEAN UNION

Emitting Countries	GHG Emissions ($MMTCO_2e$)
China	7,250
United States	7,217
European Union	5,402
Russian Federation	2,202
India	1,863
Japan	1,412
Total	**25,346**

Source: World Resources Institute, "Climate Analysis Indicators Tool (CAIT)," http://cait.wri.org/. 2010. Excludes emissions and removals from land use, land-use change and forestry (LULUCF).
Note: Emissions for Annex I nations are based on 2007 data. Emissions for Non-Annex I nations (e.g., China, India) are based on 2005 data).

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2005 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," http://unfccc.int/ghg_emissions_data/ghg_data_from_unfccc/time_series_annex_i/items/3841.php and "Flexible GHG Data Queries" with selections for total GHG emissions excluding LULUCF/LUCF, all years, and non-Annex I countries, http://unfccc.int/di/FlexibleQueries/Event.do?event= showProjection. n.d.
[2] US Environmental Protection Agency, "Inventory of US Greenhouse Gas Emissions and Sinks 1990–2006," http://www.epa.gov/climatechange/emissions/usinventoryreport.html. 2008.
[3] US Environmental Protection Agency, "Inventory of US Greenhouse Gas Emissions and Sinks 1990–2006," http://www.epa.gov/climatechange/emissions/usinventoryreport.html. 2008.

State of California

CARB compiles GHG inventories for the State of California. Based upon the 2008 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2008 greenhouse gas emissions inventory, California emitted 474 MMTCO2e ***including*** emissions resulting from imported electrical power in 2008.[4] Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 MMTCO2e ***excluding*** emissions related to imported power.

2.3 Global Climate Change

Global Climate Change (GCC) refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2 (Carbon Dioxide), N_2O (Nitrous Oxide), CH_4 (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth's atmosphere, but prevent radioactive heat from escaping, thus warming the Earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the climate change that is currently in effect differs from previous climate changes in both rate and magnitude (CARB, 2004, Technical Support document for Staff Proposal Regarding Reduction of Greenhouse Gas Emissions from Motor Vehicles).

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

[4] California Air Resources Board, "California Greenhouse Gas 2000-2008 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. 2010.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor. In 2004, the state is estimated to have produced 492 million gross metric tons of carbon dioxide equivalent greenhouse gas emissions. Despite a population increase of 16 percent between 1990 and 2004, California has significantly slowed the rate of growth of greenhouse gas emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls.

2.4 Global Climate Change Gases

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated. Although other substances such as fluorinated gases also contribute to global climate change, sources of fluorinated gases are not well defined and no accepted emissions factors or methodology exist to accurately calculate these gases. The potential for fluorinated gases to result from operation of the proposed project is primarily a concern for HCFC emissions associated with project air conditioning leakage.

Greenhouse gases have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1.

The atmospheric lifetime and GWP of selected greenhouse gases are summarized in the following Table. As shown in the table below, GWP range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride.

TABLE 2-2
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140

PFC: Tetrafluoromethane (CH4)	50,000	6,500
PFC: Hexafluoroethane (C2F6)	10,000	9,200
Sulfur Hexafluoride (SF6)	3,200	23,900
Source: EPA 2006 (URL: http://www.epa.gov/nonco2/econ-inv/table.html)		

Water Vapor: Water vapor (H_20) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

There are no health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide: Carbon dioxide (CO_2) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is

emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

Methane: Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. No health effects are known to occur from exposure to methane.

Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide: Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage).

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer

containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt. No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above Earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

2.5 Effects of Climate Change on the Project

The California Environmental Protection Agency (CalEPA) published a report titled "Scenarios of Climate Change in California: An Overview" (Climate Scenarios report) in February 2006 (California Climate Change Center 2006), that while not adequate for a CEQA project-specific or cumulative analysis, is generally instructive about the statewide impacts of global warming.

The Climate Scenarios report uses a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.5^{o}F); medium warming range (5.5-8.0^{o}F); and higher warming range (8.0-10.5^{o}F). The Climate Scenarios report then presents an analysis of future climate in California under each warming range, that while uncertain, present a picture of the impacts of global climate change trends in California.

In addition, most recently on August 5, 2009, the State's Natural Resources Agency released a public review draft of its "California Climate Adaptation Strategy" report that details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes. This report responds to the Governor's Executive Order S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts. The report was released to the public in draft form for comment and has not yet been finalized.

According to the reports, substantial temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. Under the emissions scenarios of the Climate Scenarios report, the impacts of global warming in California have the potential to include, but are not limited to, the following areas:

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90^{o}F in Los Angeles and 95^{o}F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could

increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If GHG emissions continue unabated, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

Agriculture

Increased GHG emissions could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO_2 levels

can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate O_3 pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing

temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

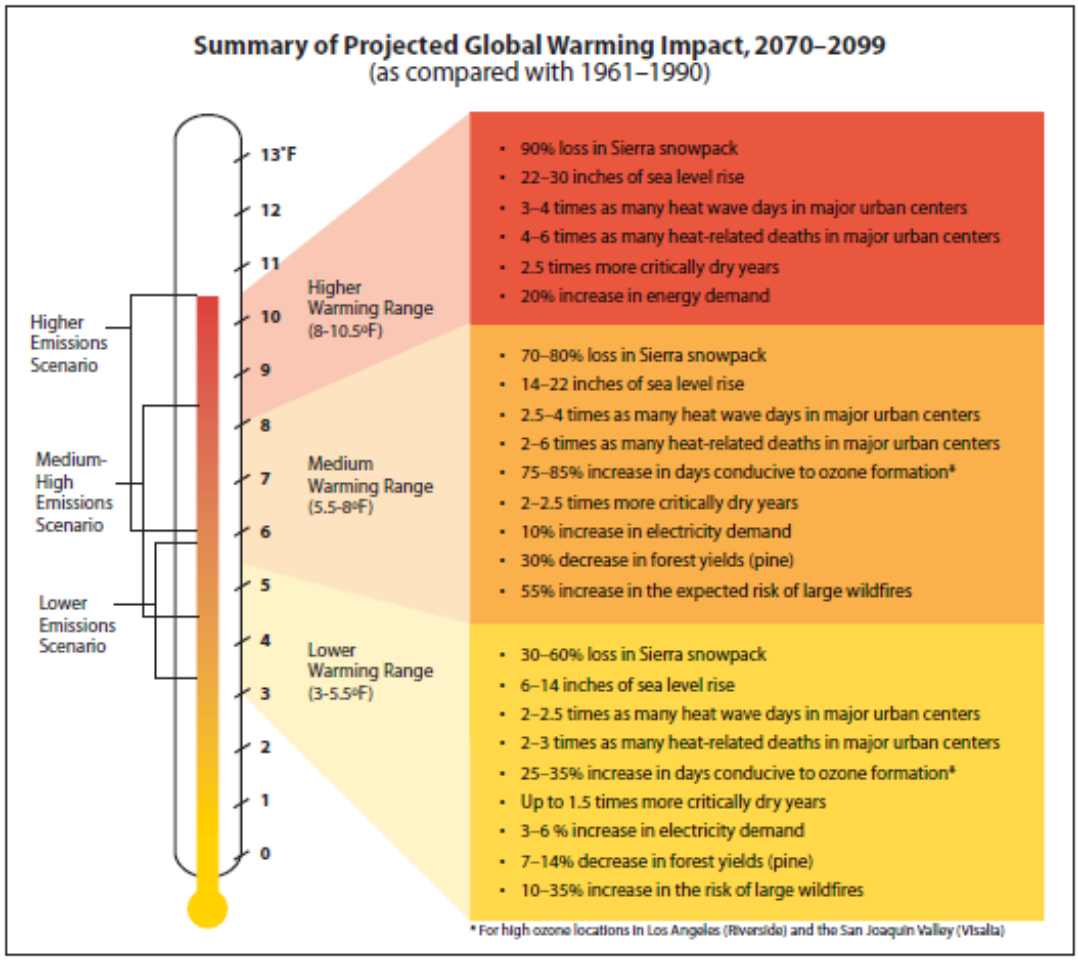
Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.6 Health Effects

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the proposed project are still being debated. Their cumulative effects to global climate change have the potential to cause great harm to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also fear that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (American Lung Association, 2004). Figure 1 presents the potential impacts of global warming.

Figure 1



Source: California Energy Commission, 2006. Our Changing Climate, Assessing the Risks to California, 2006 Biennial Report.

Specific health effects associated with directly emitted GHG emissions are as follows:

Water Vapor: There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide are estimated to be approximately 370 parts per million (ppm), the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (NIOSH 2005).

Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space (OSHA 2003).

Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage (OSHA 1999).

Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (NIOSH 1989, 1997).

Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality (NASA 2002).

2.7 GCC Regulatory Setting

International Regulation and the Kyoto Protocol:

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the

world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs.

The Kyoto protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto protocol are met, global GHG emissions could be reduced an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

Federal Regulation and the Clean Air Act:

Coinciding with the opening of Copenhagen, on December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the Clean Air Act. To date, the EPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Previously the EPA had not regulated GHGs under the Clean Air Act because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 (2007), however, the U.S. Supreme Court held that GHGs are pollutants under the Clean Air Act and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the unintended reduction of greenhouse gas emissions. In order to manage the state's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975.

Title 24 Energy Standards:

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions were adopted in 2008 and became effective on January 1, 2010.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[5] The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released a *2010 Draft California Green Building Standards Code* on its Web site.[6] It is anticipated the this update to Part 11 of the Title 24 Building Standards Code will be effective on January 1, 2011. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

California Assembly Bill No. 1493 (AB 1493):

[5] California Building Standards Commission, 2008 California Green Building Standards Code, (2009) 3.
[6] "CALGreen," http://www.bsc.ca.gov/CALGreen/default.htm. 2010

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in the state. It citied several risks that California faces from climate change, including reduction in the state's water supply, increased air pollution creation by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water energy, and insurance prices. Further, the legislature stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, ARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016.

In December 2004 a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon*, in her official capacity as Executive Director of the California Air Resources Board, et al.). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court Case, *Massachusetts vs. EPA*, the primary issue in question is whether the federal CAA provides authority for USEPA to regulate CO2 emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA. On December 11, 2007, the judge in the *Central Valley Chrysler-Jeep* case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the USEPA denied California's waiver request. California filed a petition with the Ninth Circuit Court of Appeals challenging USEPA's denial on January 2, 2008.

The Obama administration subsequently directed the USEPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. In summary, the USEPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater greenhouse gas benefits as the AB 1493 regulations for the 2012–2016 model years. Manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by "pooling" California and specified State vehicle sales; (2) revise its standards for 2012–2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California's standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal CAFE program to demonstrate compliance with the AB 1493 regulations (CARB 2009, http://www.arb.ca.gov/regact/2009/ghgpv09/ghgpvisor.pdf).

Executive Order S-3-05:

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by

building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

California Assembly Bill 32 (AB 32):

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMTs (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent)[7]. Accordingly, 427 MMTs of CO2 equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT for 2000 and 532 MMT for 2010. "Business as usual" conditions (without the 30 percent reduction to be implemented by CARB regulations) for 2020 were projected to be 596 MMTs.

[7] On a national level, the EPA's Endangerment Finding stated that electricity generation is the largest emitting sector (34%), followed by transportation (28%), and industry (19%).

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plans, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source CO2 emissions in the State.

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. CARB has until January 1, 2011, to adopt the necessary regulations to implement that plan. Implementation of individual measures must begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020. CARB is currently drafting regulations to implement the plan.

Table 2-3 shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMTons of CO2e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of today's levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer vehicle miles traveled. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMTons tons of CO2e (or approximately 1.2 percent of the GHG reduction target).

California Senate Bill No. 1368 (SB 1368):

In 2006, the State Legislature adopted Senate Bill 1368 ("SB 1368"), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission ("CPUC") to adopt a greenhouse gas emission performance standard ("EPS") for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy

longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants

TABLE 2-3

SCOPING PLAN GHG REDUCTION MEASURES TOWARD 2020 TARGET

Recommended Reduction Measures	***Reductions Counted toward 2020 Target of 169 MMT CO2e***	***Percentage of Statewide 2020 Target***
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets1	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	**146.7**	**87%**
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	**27.3**	**16%**
Total Reductions Counted toward 2020 Target	**174**	**100%**
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined2	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	**42.8**	**NA**

Source: CARB. 2008, MMTons CO2e: million metric tons of CO2e 1 Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. 2 According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368.

Senate Bill 97 (SB 97):

Pursuant to the direction of SB 97, OPR released preliminary draft CEQA Guideline amendments for greenhouse gas emissions on January 8, 2009, and submitted its final proposed guidelines to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency adopted the Guideline amendments and they became effective on March 18, 2010.

Of note, the new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. New CEQA Guideline § 15064.4(a)"A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance based standards."

The new subdivision CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See section 15130(f)).

Section 15064.4(b) of the guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse

gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Executive Order S-01-07:

On January 18, 2007 California Governor Arnold Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California's transportation fuel by at least ten percent by 2020. The order also requires that a California specific Low Carbon Fuel Standard be established for transportation fuels.

Senate Bills 1078 and 107 and Executive Order S-14-08:

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020. Governor Schwarzenegger plans to propose legislative language that will codify the new higher standard (Office of the Governor 2008).

Senate Bill 375:

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG

reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

This law also extends the minimum time period for the regional housing needs allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

CARB's Preliminary Draft Staff Proposal for Interim Significance Thresholds:

Although OPR was tasked with updating the CEQA guidelines for GHGs, OPR asked CARB in its Technical Advisory to recommend GHG-related significance thresholds to assist lead agencies in their significance determination. CARB Staff released a draft proposal on October 24th, 2008 with interim guidance on significance thresholds. In its proposal, Staff noted that non-zero thresholds can be supported by substantial evidence, but thresholds should nonetheless be sufficiently stringent to meet the State's interim (2020) and long-term (2050) emissions reduction targets. The proposal takes different approaches for different sectors – (1) industrial projects and (2) residential and commercial projects. Although CARB Staff proposed a numerical threshold for the GHG emissions of industrial projects, none were proposed for commercial (and residential) projects.

For residential and commercial projects, CARB Staff recommends that if a project complies with a previously approved plan that addresses GHG emissions, would not have a cumulatively considerable incremental contribution to impacts identified in the previously approved plan, and has a number of specific attributes related to meeting and monitoring GHG targets, then it will not be considered to have significant GHG emissions. Alternatively, if those standards cannot be met, Staff recommends a threshold based on implementation of performance standards, or equivalent mitigation measures, addressing energy use, transportation, water use, waste and construction. Specific performance standards are not presented for water, waste, construction, or transportation; however, CARB Staff recommends the California Energy Commission's Tier II Energy Efficiency standards (specified as 35% above Title 24 requirements) for the energy performance standard, and references existing GHG-reducing programs, such as LEED,

GreenPoint Rated and the California Green Building Code, as possible reference sources for the other performance standards.

The draft proposal has been very controversial and Staff may consider bringing a revised draft to the Board in the future, however no plans are confirmed at this time. A key preliminary conclusion from the draft thresholds, however, is that CARB Staff, in setting a numerical threshold for industrial projects and suggesting performance standards, does not believe a "zero threshold" is mandated by CEQA. Similarly, South Coast Air Quality Management District Staff, in proposing interim industrial thresholds, explicitly stated in a December 5, 2008 report that a zero threshold would not be feasible to implement.

South Coast Air Quality Management District Recommendations for Significance Thresholds:

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group."[8] The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; non-residential; industrial; etc. However, the threshold is still under development. In December 2008, staff presented, and the SCAQMD Governing Board approved a significance threshold for stationary source projects (Industrial) where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of carbon dioxide equivalent (MTCO2e) as a screening numerical threshold.

At present time, the SCAQMD has not adopted thresholds for projects such as the one analyzed in this technical report (e.g. a non stationary source). The SCAQMD is considering a tiered

[8] For more information visit: http://www.aqmd.gov/ceqa/handbook/GHG/GHG.html.

approach to determine the significance of residential and commercial projects. The draft approach that was published in October 2008 is as follows:[9]

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less than significant impacts with respect to climate change.

- Tier 2: Is the project's GHG emissions within the GHG budgets in an approved regional plan? (The plan must be consistent with *State CEQA Guidelines* Sections 15064(h)(3), 15125(d), or 15152(s).) If yes, there is a presumption of less than significant impacts with respect to climate change.

- Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 MTCO2e per year for industrial projects and 3,000 MTCO2e for commercial/residential projects) and is the project X percent beyond the Title 24 standard and achieve Y percent reduction in water use (the X and Y values were not determined at the time the draft approach was published)? If yes, there is a presumption of less than significant impacts with respect to climate change.

- Tier 4: Does the project meet one of the following performance standards (the performance standards were not well-defined at the time the draft approach was published)? If yes, there is a presumption of less than significant impacts with respect to climate change.

  Option 1: Uniform Percent Emission Reduction Target Objective (e.g., 30 percent) from BAU by incorporating project design features and/or implementing emission reduction measures.

  Option 2: Early Implementation of Applicable AB 32 Scoping Plan Measures.

  Option 3: Achieve sector-based standard (e.g., pounds per person, pounds per square foot, etc.).

- Tier 5: Does the project obtain offsets alone or in combination with the above to achieve the target significance screening level (offsets provided for 30-year project life, unless project

[9] South Coast Air Quality Management District, "Greenhouse Gases (GHG) Significance Thresholds Working Group Meeting #6, "http://www.aqmd.gov/CEQA/handbook/GHG/2008/oct22mtg/oct22.html. 2008.

life limited by permit, lease, or other legally binding conditions)? If yes, there is a presumption of less than significant impacts with respect to climate change. Otherwise, the project is significant.

In November 2009, the following revisions were proposed for Tiers 3 and 4:[10]

- Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 MTCO2e per year for industrial projects; 3,500 MTCO2e for residential projects; 1,400 MTCO2e for commercial projects; 3,000 MTCO2e for mixed-use or all land use projects)? If yes, there is a presumption of less than significant impacts with respect to climate change.

- Tier 4: Does the project meet one of the following performance standards? If yes, there is a presumption of less than significant impacts with respect to climate change.

  Option #1: Achieve a 28 percent reduction from a base case scenario, including land use sector reductions from AB 32 (total emissions not to exceed 25,000 MTCO2e).

  Option #2: Achieve a project-level efficiency target of 4.6 MTCO2e per service population (total emissions not to exceed 25,000 MTCO2e) or plan-level efficiency target of 6.6 MTCO2e.

In September 2010, the Working Group released additional revisions which recommended a project-level efficiency target of 4.8 MTCO2e per service population as a 2020 target and 3.0 MTCO2e per service population as a 2035 target. The recommended plan-level target for 2020 was 6.6 MTCO2e and the plan level target for 2035 was 4.1 MTCO2e. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable to boilers and process heaters, forestry, and manure management projects.

CEQA Evaluation of Global Climate Change:

[10]South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #14," http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/nov19.html. 2009.

Pursuant to the direction of SB 97, OPR released preliminary draft CEQA Guideline amendments for greenhouse gas emissions on January 8, 2009, and submitted its final proposed guidelines to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency adopted the Guideline amendments and they became effective on March 18, 2010. Of note, the new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. New CEQA Guideline § 15064.4(a)"A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance based standards."

The CEQA Guideline amendments, do not identify a threshold of significance for greenhouse gas emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Specific GHG language incorporated in the Guidelines' suggested Environmental Checklist (Guidelines Appendix G) is as follows:

VII. GREENHOUSE GAS EMISSIONS

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

2.8 Discussion on Establishment of Significance Thresholds

In order to assess the significance of a proposed project's environmental impacts it is necessary to identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. As discussed above, while project-related GHG emissions can be estimated, the direct impacts of such emissions on climate change and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed project would directly affect global climate change. The SCAQMD has adopted a quantitative GHG emission significance thresholds to assess direct impacts from industrial projects for which the SCAQMD is the lead agency. The SCAQMD and other air quality agencies concur that GHG and climate change should be evaluated as a potentially significant cumulative rather than project-specific impact. The SCAQMD is also considering adoption of a numeric plan-level efficiency target of 6.6 MTCO2e per service population.

AB 32 states, in part, that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, global climate change is considered to be a significant cumulative impact. GHG emissions from the project would contribute to cumulative GHG emissions in California and to the potential adverse environmental impacts of climate change.

As previously discussed, the new CEQA guidelines indicate that a project would result in a significant impact on climate change if a project were to: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Or b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Since AB 32 is the primary plan, policy or regulation adopted to reduce GHG emissions ,, a project would have a significant impact if it did not comply with the applicable Scoping Plan Measures.

Currently, there is no adopted threshold of significance for determining the cumulative significance of a project’s GHG emissions on global climate change. In the most recent 2007 IPCC assessment report (IPPC 2007b, Synthesis Report), the IPCC acknowledges that

anthropogenic warming and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks even if GHG concentrations were to be stabilized. The IPCC further found that both past and future anthropogenic CO_2 emissions will continue to contribute to warming and sea level rise for more than a millennium, due to the time scales required for the removal of this gas from the atmosphere. (IPPC 2007b, Synthesis Report) Further, the IPCC assessment noted that defining what is dangerous anthropogenic interference with the climate system and, consequently, the limits to be set for policy purposes are complex tasks that can only be partially based on science, as such definitions inherently involve normative judgments. (IPCC 2007b – Working Group III)

Based on all the above, for the purposes of this analysis, implementation of the proposed project may have a significant adverse impact on GHG emissions if it would result in any of the following:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance.

    a. A potentially significant impact would occur if the project exceeds the proposed SCAQMD's threshold of 6.6 MT CO2e/SP/Yr.

2. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

    a. Fail to show consistency with AB 32's Scoping Plan and related measures.

2.9 Project-Related GHG Emissions

CEQA Guidelines 15064.4 (b) (1) states that a lead agency may use a model or methodology to quantify greenhouse gas emissions associated with a project.

On February 3, 2011, the SCAQMD released the California Emissions Estimator Model (CALEEMOD) Emissions Inventory Model™. The purpose of this new model is to more accurately calculate air quality and greenhouse gas (GHG) emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation

measures. As such, the latest version of CALEEMOD™ was used for this project. The CalEEMod™ model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

A summary of the project's GHG emissions are presented on Table 2-4 as follows.

TABLE 2-4

TOTAL PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL) (METRIC TONS PER YEAR) WITHOUT MITIGATION

	Emissions (metric tons per year)			
Emission Source	**CO_2**	**CH_4 (CO_2E)**	**N_2O(CO_2E)**	**Total CO_2E**
Annual construction-related emissions amortized over 30 years	695.75	0.79	--	696.54
Area Source Emissions	1,208.11	1.26	6.20	1,216.04
Energy	13,118.44	5.88	40.30	13,166.08
Mobile Sources	28,650.34	26.25	--	28,676.62
Waste	339.04	420.84	--	759.80
Water Usage	1,860.83	96.81	40.30	1,997.59
Total CO_2E (All Sources)			**46,512.67**	
Service Population			**6,807**	
MT CO_2E/Service Population (SP)/Yr			**6.83**	
Threshold MT CO_2E/SP/Yr			**6.6**	
Significant?			**YES**	

Source: CalEEMod™ model output, See Appendix "A" for detailed model outputs.
Note: Totals obtained from CalEEMod™ and may not total 100% due to rounding

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TABLE 2-5

TOTAL PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL) (METRIC TONS PER YEAR) WITH MITIGATION

	Emissions (metric tons per year)			
Emission Source	**CO_2**	**CH_4 (CO_2E)**	**N_2O(CO_2E)**	**Total CO_2E**
Annual construction-related emissions amortized over 30 years	695.75	0.79	--	696.54
Area Source Emissions	1,208.11	1.26	6.20	1,216.04
Energy	11,410.90	5.04	37.20	11,451.97
Mobile Sources	28,376.74	26.04	--	28,402.80
Waste	339.04	420.84	--	759.80
Water Usage	1,503.43	77.49	31.00	1,612.88
Total CO_2E (All Sources)			**44,140.03**	
Service Population			**6,807**	
MT CO_2E/Service Population (SP)/Yr			**6.48**	
Threshold MT CO_2E/SP/Yr			**6.6**	
Significant?			**NO**	

Source: CalEEMod™ model output, See Appendix "A" for detailed model outputs.
Note: Totals obtained from CalEEMod™ and may not total 100% due to rounding

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2.10 Analysis of Greenhouse Gas Impact

FACTOR NO. 1: The extent to which the project may generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance.

As shown on Table 2-4, prior to mitigation, the project will result in approximately 46,512.67 MT/yr CO2e and 6.83 MT CO2e/Service Population (SP)/Yr; the proposed project would therefore exceed the threshold of 6.6 MT CO2e/SP/Yr prior to mitigation. After mitigation, as shown on Table 2-5, the project will result in approximately 44,140.03 MT/yr CO2e and 6.48 MT CO2e/SP/Yr, therefore, a less than significant impact is expected after mitigation.

FACTOR NO. 2: The extent to which the project may conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Consistency with the CARB Scoping Plan

AB 32 requires California to reduce its GHG emissions by approximately 29% below business as usual. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with the 29% reduction below business as usual required by AB 32.

The proposed project would generate GHG emissions from a variety of sources which would all emit CO_2, CH_4 and N_2O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the proposed project.

Table 2-6 below, presents the 39 Recommended Actions (qualitative measures) identified to date by CARB in its Climate Change Proposed Scoping Plan. Of the 39 measures identified, those that would be considered to be applicable to the Project would primarily be those actions related to transportation, electricity and natural gas use, green building design and industrial uses. Consistency of the Project with these measures is evaluated by each source-type measure below. Table 2-6 identifies which CARB Recommended Actions applies to the Project, and of those, whether the Project is consistent therewith. A discussion of how the Project is consistent with each applicable CARB Recommended Action is set forth after Table 2-6.

TABLE 2-6

RECOMMENDED ACTIONS FOR CLIMATE CHANGE PROPOSED SCOPING PLAN

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	YES	NO
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	YES	NO
T-3	Transportation	Regional Transportation-Related GHG Targets	YES	NO
T-4	Transportation	Vehicle Efficiency Measures	YES	NO
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	NO	NO
T-6	Transportation	Goods-movement Efficiency Measures	NO	NO
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	NO	NO
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	NO	NO
T-9	Transportation	High Speed Rail	NO	NO
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	YES	NO
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	NO	NO
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	NO	NO
E-4	Electricity and Natural Gas	Million Solar Roofs	NO	NO
CR-1	Electricity and Natural Gas	Energy Efficiency	NO	NO
CR-2	Electricity and Natural Gas	Solar Water Heating	NO	NO
GB-1	Green Buildings	Green Buildings	YES	NO
W-1	Water	Water Use Efficiency	YES	NO
W-2	Water	Water Recycling	NO	NO
W-3	Water	Water System Energy Efficiency	NO	NO
W-4	Water	Reuse Urban Runoff	NO	NO
W-5	Water	Increase Renewable Energy Production	NO	NO
W-6	Water	Public Goods Charge (Water)	NO	NO
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	NO	NO
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	NO	NO
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	NO	NO
I-4	Industry	Refinery Flare Recovery Process Improvements	NO	NO
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	NO	NO
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	NO	NO
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	NO	NO
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	NO	NO
F-1	Forestry	Sustainable Forest Target	NO	NO
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	NO	NO
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	NO	NO
H-3	High Global Warming Potential Gases	Reduction in Perflourocarbons in Semiconductor Manufacturing (Discrete Early Action)	NO	NO
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	NO	NO
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	NO	NO
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	NO	NO
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	NO	NO
A-1	Agriculture	Methane Capture at Large Dairies	NO	NO

SOURCE: CARB, 2008.

A detailed discussion of the applicability of each measure and if the project conflicts with its implementation is as follows:

Transportation

CARB's Scoping Plan identifies nine transportation-related recommended actions. Action T-1 concerns improvements to light-duty vehicle technology for the purposes of reducing GHG emissions. This action focuses on legislating improved controls for vehicle manufacturers and would not generally be considered applicable to the proposed project. Vehicles utilized by the proposed project would be subject to the Pavley standards, as applicable, and would be consistent with and not conflict with this recommended action.

Action T-2 concerns implementation of a low carbon fuel standard. To reduce the carbon intensity of transportation fuels, CARB is developing a Low Carbon Fuel Standard (LCFS), which would reduce the carbon intensity of California's transportation fuels by at least ten percent by 2020 as called for by Governor Schwarzenegger in Executive Order S-01-07. LCFS will incorporate compliance mechanisms that provide flexibility to fuel providers in how they meet the requirements to reduce greenhouse gas emissions.

While implementation of such a standard is not within the purview of a development project, a land use such the proposed project would be a substantial consumer of fuels for transportation purposes. Projects such as the proposed project would be required to participate with the use of low carbon fuels as they are made available through purchase of fuels for its vehicle fleet. Therefore, the proposed project would not conflict with measures concerning the use of low carbon fuels.

Action T-3 addressees regional transportation targets for reducing GHG emissions. SB 375 requires CARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. It sets forth a collaborative process to establish these targets, including the appointment by CARB of a Regional Targets Advisory Committee to recommend factors to be considered and methodologies for setting greenhouse gas emissions reduction targets. SB 375 also provides incentives – relief from certain California Environmental Quality Act (CEQA) requirements for development projects that are consistent with regional plans that achieve the targets. The proposed project is not expected to conflict with the SB 375 targets. The intent of

the project is to reduce VMT within the region by reducing trip lengths and providing a sustainable community for the Arantine Hills Specific Plan.

Action T-4 is concerned with vehicle efficiency measures. The California Integrated Waste Management Board (CIWMB) with various partners continues to conduct a public awareness campaign to promote sustainable tire practices. CARB is pursuing a regulation to ensure that tires are properly inflated when vehicles are serviced. In addition, CEC in consultation with CIWMB is developing an efficient tire program focusing first on data gathering and outreach, then on potential adoption of minimum fuel-efficient tire standards, and lastly on the development of consumer information requirements for replacing tires. CARB is also pursuing ways to reduce engine load via lower friction oil and reducing the need for air conditioner use. ARB is actively engaged in the regulatory development process for the tire inflation component of this measure. While implementation of such a standard in not within the purview of a development project, a land use such as that proposed would generate VMT and be subject to any applicable adopted standards and would therefore not conflict with the recommended measure.

Action T-5 addresses electrification of ships at ports and is not applicable to the proposed project. Therefore, the proposed project would not conflict with this measure.

Action T-6 also primarily addresses port operations and is not applicable to the proposed project. Therefore, the proposed project would not conflict with this measure.

Action T-7 requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology. Implementation of such a standard is not within the purview of the proposed project since various trucks may access the site. Therefore, the proposed project would not conflict with this measure.

Action T-8 focuses on hybridization of medium- and heavy-duty vehicles. The implementation approach to Action T-8 is to adopt a regulation and/or incentive program that reduces GHG emissions by encouraging hybrid technology as applied to vocational applications that have significant urban, stop-and-go driving, idling, and power take-off operations in their duty cycle. Such applications include parcel delivery trucks and vans. Implementation of such a standard is

not within the purview of the proposed project since various trucks may access the site. Therefore, the proposed project would not conflict with this measure.

Action T-9 concerns implementation of a high speed rail system. A high speed rail (HSR) system is part of the statewide strategy to provide more mobility choice and reduce greenhouse gas emissions. This measure supports implementation of plans to construct and operate a HSR system between northern and southern California. As planned, the HSR is a 700-mile-long rail system capable of speeds in excess of 200 miles per hour on dedicated, fully-grade separated tracks with state-of-the-art safety, signaling and automated rail control systems. The system would serve the major metropolitan centers of California in 2030 and is projected to displace between 86 and 117 million riders from other travel modes in 2030. The proposed project would not conflict with implementation of a HSR system.

Electricity and Natural Gas

Action E-1, together with Action GB-1 (Green Building), aims to reduce electricity demand by increased efficiency of Utility Energy Programs and adoption of more stringent building and appliance standards. Elements of this action include encouraging construction of zero net energy (ZNE) buildings and implementation of passive solar design. In addition to employing on-site electricity generation, a ZNE building must either replace natural gas with renewable energy for space and water heating, or compensate for natural gas use by generating surplus electricity for sale on the state's electricity grid. The proposed project is required to comply with the 2008 Title 24 Energy Efficiency Standards and applicable Green Building Standards. Therefore, the proposed project would not conflict with this measure.

Action E-2 encourages an increase in the use of combined heat and power (CHP) use, or co-generation, facilities. California has supported CHP for many years, but market and other barriers continue to keep CHP from reaching its full market potential. Increasing the deployment of efficient CHP will require a multi-pronged approach that includes addressing significant barriers and instituting incentives or mandates where appropriate. Implementation of such a standard is not within the purview of the proposed project; therefore, the proposed project would not conflict with this measure.

Action E-3 concerns Renewable Portfolio Standards for utilities and does not apply directly to development projects, therefore, the proposed project would not conflict with the recommended measure.

Action E-4 strives to promote solar generated electricity. The Million Solar Roofs initiative is not within the purview of any one individual project. Therefore, the proposed project would not conflict with this measure.

Water Use

Implementation of all but two of the Recommended Actions related to water use are not within the purview of the proposed project. The two that apply W-1 (Water Use Efficiency) and W-3 (Water System Energy Efficiency). Because the proposed project would not exceed the audit threshold, as set forth in the preceding impact analysis, the proposed project is consistent with and would not obstruct the recommended actions.

Industrial Use

The proposed project is not an industrial use and therefore these measures do not apply to the project.

Consistency with GHG Emission Reduction Strategies set forth in the 2006 CAT Report

Table 2-7 (as follows) sets forth the emission reduction strategies set forth in the 2006 CAT Report along with an explanation as to how the Project is consistent therewith. Table 2-7 also notes whether the strategy is applicable to the Project:

Table 2-7: Project Compliance with Applicable 2006 CAT Report Greenhouse Gas Emissions Reduction Strategies

Strategy	Project Compliance
California Air Resource Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	Compliant. Vehicles that will access the project site will be in compliance with CARB vehicle standards to the maximum extent feasible.
Other Light Duty Vehicle Technology New standards would be adopted to phase in beginning in the 2017 model.	
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy-duty	

vehicles and an education program for the heavy-duty vehicle sector.	
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Compliant. Heavy-duty diesel trucks that access the project site will be required to limit idling to no more than five minutes.
Hydrofluorocarbon Reduction 1) Ban retail sale of HFC in small cans; 2) Require that only low GWP refrigerants be used in new vehicular systems; 3) Adopt specifications for new commercial refrigeration; 4) Add refrigerant leak-tightness to the pass criteria for vehicular Inspection and Maintenance programs; 5) Enforce federal ban on releasing HFCs.	Compliant. This measure applies to consumer products. When CARB adopts regulations for these reduction measures, any products that the regulations apply to will comply with the measures.
Transportation Refrigeration Units (TRUs), Off-Road Electrification, Port Electrification Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Not Applicable.
Alternative Fuels: Biodiesel Blends CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Compliant. When CARB adopts regulations for the use of biodiesel fuel in heavy-duty trucks, trucks supplying the commercial uses will comply with this measure.
Reduced Venting and Leaks in Oil and Gas Systems Rule considered for adoption by the Air Pollution Control Districts for improved management practices.	Not Applicable.
Hydrogen Highway The California Hydrogen Highway Network (CA H_2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.	Not Applicable.
Integrated Waste Management Board	
Achieve 50 percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Compliant. Project design will include provisions for tenants to recycle.
Zero Waste - High Recycling Additional recycling beyond the State's 50 percent recycling goal.	
Department of Forestry	
Forest Management Strategies for storing more carbon through forest management activities can involve a range of management activities such as increasing either the growth of individual trees, the overall age of trees prior	Not applicable.

to harvest, or dedicating land to older age trees.	
Forest Conservation Conservation projects are designed to minimize/prevent the climate change emissions that are associated with the conversion of forestland to non-forest uses by adding incentives to maintain an undeveloped forest landscape.	Not applicable.
Fuels Management/Biomass Large, episodic, unnaturally hot fires are an increasing trend on California's wild lands because of decades of fire suppression activities, sustained drought, and increasing insect, disease, and invasive plans infestations. Actions taken to reduce wildfire severity through fuel reduction and biomass development would reduce climate change emissions from wildfire, increase carbon sequestration, replace fossil fuels, and provide significant economic development opportunities.	Not applicable.
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. The implementation of the proposed project will result in the planting of additional trees and vegetation at the project site.
Afforestation/Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not applicable.
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	Compliant. The project shall implement U.S. EPA Certified WaterSense labeled or equivalent faucets and high-efficiency toilets (HETs), and implement water-conserving shower heads to the extent feasible.
California Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Compliant. Project will be compliant with updated (2008) Title 24 standards for building construction.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. Appliances purchased for use in project will be consistent with existing energy efficiency standards.
Fuel-Efficient Replacement Tires & Inflation Programs State legislation (Chapter 912, Statues of 2001) directed the Energy Commission to investigate and to recommend ways to improve fuel efficiency of vehicle	Not Applicable.

tires. The bill established a statewide program to encourage the production and use of more fuel efficient tires.	
Cement Manufacturing Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Not Applicable.
Municipal Utility Strategies Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	Not Applicable.
Alternative Fuels: non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	Not Applicable.
Business Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment.	Not Applicable.
Measures to Improve Transportation Energy Efficiency Builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools and information that advance cleaner transportation and reduce climate change emissions.	Not Applicable.
Department of Food and Agriculture	
Conservation tillage/cover crops Conservation tillage and cover crops practices are increasingly being used by California farmers for a variety of reasons, including improved soil tilth, improved water use efficiency, reduced tillage requirements, saving labor and fuel, and reduced fertilizer inputs.	Not Applicable.
Enteric Fermentation Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	Not Applicable.
State and Consumer Services Agency	Not Applicable.

Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels.	Compliant. With implementation of the project design features, the project is expected to reduce energy use. Additionally, the project will be consistent with energy standards required by Title 24 or better.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	Not Applicable.
California Solar Initiative Installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses; increased use of solar thermal systems to offset the increasing demand for natural gas; use of advanced metering in solar applications; and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	Compliant. Recommended project design features include a provision that buildings shall be designed to accommodate renewable energy sources, such as photovoltaic solar energy systems as is economically and physically feasible.
Investor-Owned Utility This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.	Not Applicable.

Source: State of California, Environmental Protection Agency, Climate Action Team, 2006.

Conclusion

The Project is consistent with, or otherwise not in conflict with the CARB Scoping Plan recommended measures and actions.

As such, a qualitative assessment of the Project impacts based upon consistency with the CARB Scoping Plan supports the conclusion that the Project GHG emissions are not cumulatively considerable.

Lastly results of the analysis indicate that the proposed project will not exceed the proposed SCAQMD quantitative efficiency threshold. Therefore a less than significant impact is expected with respect to greenhouse gas emissions.

3.0 REFERENCES

1. American Lung Association. *Fact Sheet: Air Quality and Health Impacts of Greenhouse Gas Emissions and Global Warming.* 2004.

2. California Air Resources Board, 2006. Emfac2007 (Version 2.3) – Calculating Emission Inventories for Vehicles in California.

3. California Environmental Protection Agency. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* March 2006.

4. California Air Pollution Control Officers Association. *CEQA & Climate Change*. January 2008.

5. California Air Resources Board, 2004. Technical Support document for Staff Proposal Regarding Reduction of Greenhouse Gas Emissions from Motor Vehicles.

6. Governor's Office of Planning and Research. *CEQA and Climate Change: Addressing Climate Change Through CEQA Review.* June 19, 2008.

7. KTGY, February 2010. *Arantine Hills Specific Plan.*

8. National Aeronautics and Space Administration: *Air Pollution as a Climate Forcing: A Workshop*. 2002. http://www.giss.nasa.gov/meetings/pollution2002/summaryc.html

9. Occupational Safety and Health Administration: *Guideline for Nitrous Oxide*, 1999. http://www.osha.gov/SLTC/healthguidelines/nitrousoxide/recognition.html

10. South Coast Air Quality Management District (SCAQMD), 1993. *CEQA Air Quality Handbook.*

11. South Coast Air Quality Management District (SCAQMD), 2011. *California Emissions Estimator Model (CalEEMod™).*

12. Urban Crossroads, Inc., 2011. *Arantine Hills Specific Plan Traffic Impact Analysis.*

APPENDIX A

CalEEMod™ Input/Output

Service Population Calculation

Per City of Corona General Plan EIR

Employment Generation factor = 1 per 500 sf (Commercial-Neighborhood/Regional Retail & Office)

Persons per household = 3.28

Therefore, for the proposed project:

1,621Dwelling Units x 3.28 = 5,316.88 persons

745,300 square feet of (Office, Business Park, Specialty Retail and Shopping Center) / 500 = 1,490.6 employees

Service Population = 5,136.88 persons + 1,490.6 employees = 6,807

Arantine Hills Phase 1 & 2

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	59	1000sqft
Other Asphalt Surfaces	74.8	Acre
City Park	4	Acre
User Defined Recreational	11	User Defined Unit
Condo/Townhouse	1072	Dwelling Unit
Single Family Housing	549	Dwelling Unit
Regional Shopping Center	396.4	1000sqft
Strip Mall	59	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Riverside Public Utilities
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use -

Construction Phase - Construction durations available from project team to represent conservative scenario.

Off-road Equipment - conservative construction equipment

Off-road Equipment - Conservative hours/day (8)

Off-road Equipment - Conservative construction equipment

Off-road Equipment - conservative construction equipment

Off-road Equipment - Conservative Equipment List

Grading - Project Acreage

Vehicle Trips - Trip Rates from Traffic Study

Woodstoves - No Wood Stoves
Gas Fireplaces only

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Off-road Equipment -

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					
2011	1.30	10.09	5.63	0.01	1.09	0.55	1.64	0.46	0.55	1.01	0.00	930.18	930.18	0.10	0.00	932.35
2012	5.79	10.04	13.40	0.02	1.62	0.58	2.20	0.07	0.58	0.66	0.00	2,118.08	2,118.08	0.15	0.00	2,121.19
2013	7.93	11.61	17.18	0.03	2.40	0.61	3.00	0.11	0.61	0.72	0.00	2,931.35	2,931.35	0.17	0.00	2,935.00
2014	5.92	10.50	15.45	0.03	2.29	0.54	2.83	0.11	0.54	0.65	0.00	2,818.57	2,818.57	0.15	0.00	2,821.82
2015	4.20	9.55	14.36	0.03	2.28	0.49	2.77	0.11	0.49	0.59	0.00	2,777.04	2,777.04	0.14	0.00	2,780.01
2016	5.39	8.84	14.17	0.03	2.40	0.46	2.85	0.11	0.46	0.57	0.00	2,858.12	2,858.12	0.14	0.00	2,861.02
2017	5.24	8.06	13.26	0.03	2.39	0.41	2.80	0.11	0.41	0.52	0.00	2,814.96	2,814.96	0.13	0.00	2,817.62
2018	5.15	7.42	12.55	0.03	2.40	0.38	2.77	0.04	0.36	0.40	0.00	2,795.50	2,795.50	0.12	0.00	2,797.96
2019	0.43	2.14	3.50	0.01	0.68	0.10	0.78	0.01	0.10	0.11	0.00	828.69	828.69	0.03	0.00	829.36
Total	**41.35**	**78.25**	**109.50**	**0.22**	**17.55**	**4.12**	**21.64**	**1.13**	**4.10**	**5.23**	**0.00**	**20,872.49**	**20,872.49**	**1.13**	**0.00**	**20,896.33**

2.1 Overall Construction

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					
2011	1.30	10.09	5.63	0.01	0.44	0.55	0.99	0.18	0.55	0.73	0.00	930.18	930.18	0.10	0.00	932.35
2012	5.79	10.04	13.40	0.02	1.62	0.58	2.20	0.07	0.58	0.66	0.00	2,118.08	2,118.08	0.15	0.00	2,121.19
2013	7.93	11.61	17.18	0.03	2.40	0.61	3.00	0.11	0.61	0.72	0.00	2,931.35	2,931.35	0.17	0.00	2,935.00
2014	5.92	10.50	15.45	0.03	2.29	0.54	2.83	0.11	0.54	0.65	0.00	2,818.57	2,818.57	0.15	0.00	2,821.82
2015	4.20	9.55	14.36	0.03	2.28	0.49	2.77	0.11	0.49	0.59	0.00	2,777.04	2,777.04	0.14	0.00	2,780.01
2016	5.39	8.84	14.17	0.03	2.40	0.46	2.85	0.11	0.46	0.57	0.00	2,858.12	2,858.12	0.14	0.00	2,861.02
2017	5.24	8.06	13.26	0.03	2.39	0.41	2.80	0.11	0.41	0.52	0.00	2,814.96	2,814.96	0.13	0.00	2,817.62
2018	5.15	7.42	12.55	0.03	2.40	0.38	2.77	0.04	0.36	0.40	0.00	2,795.50	2,795.50	0.12	0.00	2,797.96
2019	0.43	2.14	3.50	0.01	0.68	0.10	0.78	0.01	0.10	0.11	0.00	828.69	828.69	0.03	0.00	829.36
Total	**41.35**	**78.25**	**109.50**	**0.22**	**16.90**	**4.12**	**20.99**	**0.85**	**4.10**	**4.95**	**0.00**	**20,872.49**	**20,872.49**	**1.13**	**0.00**	**20,896.33**

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	11.58	0.29	24.80	0.00		0.00	0.22		0.00	0.22	0.00	1,208.11	1,208.11	0.06	0.02	1,216.04
Energy	0.28	2.36	1.03	0.02		0.00	0.19		0.00	0.19	0.00	13,118.44	13,118.44	0.28	0.13	13,166.08
Mobile	16.84	41.92	171.90	0.36	36.69	2.01	38.70	0.57	1.94	2.51	0.00	28,650.34	28,650.34	1.25	0.00	28,676.62
Waste						0.00	0.00		0.00	0.00	339.04	0.00	339.04	20.04	0.00	759.80
Water						0.00	0.00		0.00	0.00	0.00	1,860.83	1,860.83	4.61	0.13	1,997.59
Total	**28.70**	**44.57**	**197.73**	**0.38**	**36.69**	**2.01**	**39.11**	**0.57**	**1.94**	**2.92**	**339.04**	**44,837.72**	**45,176.76**	**26.24**	**0.28**	**45,816.13**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	11.58	0.29	24.80	0.00		0.00	0.22		0.00	0.22	0.00	1,208.11	1,208.11	0.06	0.02	1,216.04
Energy	0.23	1.96	0.85	0.01		0.00	0.16		0.00	0.16	0.00	11,410.90	11,410.90	0.24	0.12	11,451.97
Mobile	16.74	41.66	170.63	0.36	36.32	1.99	38.32	0.57	1.92	2.48	0.00	28,376.74	28,376.74	1.24	0.00	28,402.80
Waste						0.00	0.00		0.00	0.00	339.04	0.00	339.04	20.04	0.00	759.80
Water						0.00	0.00		0.00	0.00	0.00	1,503.43	1,503.43	3.69	0.10	1,612.88
Total	**28.55**	**43.91**	**196.28**	**0.37**	**36.32**	**1.99**	**38.70**	**0.57**	**1.92**	**2.86**	**339.04**	**42,499.18**	**42,838.22**	**25.27**	**0.24**	**43,443.49**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2011

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					0.73	0.00	0.73	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.35	2.87	1.61	0.00		0.15	0.15		0.15	0.15	0.00	232.11	232.11	0.03	0.00	232.71
Total	**0.35**	**2.87**	**1.61**	**0.00**	**0.73**	**0.15**	**0.88**	**0.33**	**0.15**	**0.48**	**0.00**	**232.11**	**232.11**	**0.03**	**0.00**	**232.71**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.31
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.30**	**5.30**	**0.00**	**0.00**	**5.31**

3.2 Site Preparation - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.28	0.00	0.28	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.35	2.87	1.61	0.00		0.15	0.15		0.15	0.15	0.00	232.11	232.11	0.03	0.00	232.71
Total	**0.35**	**2.87**	**1.61**	**0.00**	**0.28**	**0.15**	**0.43**	**0.13**	**0.15**	**0.28**	**0.00**	**232.11**	**232.11**	**0.03**	**0.00**	**232.71**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.31
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.30**	**5.30**	**0.00**	**0.00**	**5.31**

3.3 Grading - 2011

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					0.34	0.00	0.34	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.49	4.07	2.19	0.00		0.21	0.21		0.21	0.21	0.00	367.10	367.10	0.04	0.00	367.94
Total	**0.49**	**4.07**	**2.19**	**0.00**	**0.34**	**0.21**	**0.55**	**0.12**	**0.21**	**0.33**	**0.00**	**367.10**	**367.10**	**0.04**	**0.00**	**367.94**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.01	0.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	7.36	7.36	0.00	0.00	7.37
Total	**0.00**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**7.36**	**7.36**	**0.00**	**0.00**	**7.37**

3.3 Grading - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.13	0.00	0.13	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.49	4.07	2.19	0.00		0.21	0.21		0.21	0.21	0.00	367.10	367.10	0.04	0.00	367.94
Total	**0.49**	**4.07**	**2.19**	**0.00**	**0.13**	**0.21**	**0.34**	**0.05**	**0.21**	**0.26**	**0.00**	**367.10**	**367.10**	**0.04**	**0.00**	**367.94**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.01	0.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	7.36	7.36	0.00	0.00	7.37
Total	**0.00**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**7.36**	**7.36**	**0.00**	**0.00**	**7.37**

3.4 Trenching - 2011

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	0.27	2.29	1.18	0.00		0.12	0.12		0.12	0.12	0.00	249.69	249.69	0.02	0.00	250.15
Total	**0.27**	**2.29**	**1.18**	**0.00**		**0.12**	**0.12**		**0.12**	**0.12**	**0.00**	**249.69**	**249.69**	**0.02**	**0.00**	**250.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.98	5.98	0.00	0.00	5.99
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.98**	**5.98**	**0.00**	**0.00**	**5.99**

3.4 Trenching - 2011

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	0.27	2.29	1.18	0.00		0.12	0.12		0.12	0.12	0.00	249.69	249.69	0.02	0.00	250.15
Total	**0.27**	**2.29**	**1.18**	**0.00**		**0.12**	**0.12**		**0.12**	**0.12**	**0.00**	**249.69**	**249.69**	**0.02**	**0.00**	**250.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.98	5.98	0.00	0.00	5.99
Total	**0.00**	**0.00**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.98**	**5.98**	**0.00**	**0.00**	**5.99**

3.5 Paving - 2011

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	0.14	0.84	0.48	0.00		0.07	0.07		0.07	0.07	0.00	59.54	59.54	0.01	0.00	59.78
Paving	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.17**	**0.84**	**0.48**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**59.54**	**59.54**	**0.01**	**0.00**	**59.78**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11	3.11	0.00	0.00	3.11
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.11**	**3.11**	**0.00**	**0.00**	**3.11**

3.5 Paving - 2011

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	0.14	0.84	0.48	0.00		0.07	0.07		0.07	0.07	0.00	59.54	59.54	0.01	0.00	59.78
Paving	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.17**	**0.84**	**0.48**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**59.54**	**59.54**	**0.01**	**0.00**	**59.78**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11	3.11	0.00	0.00	3.11
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.11**	**3.11**	**0.00**	**0.00**	**3.11**

3.5 Paving - 2012

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	0.25	1.51	0.90	0.00		0.13	0.13		0.13	0.13	0.00	112.46	112.46	0.02	0.00	112.89
Paving	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**1.51**	**0.90**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**112.46**	**112.46**	**0.02**	**0.00**	**112.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.73	5.73	0.00	0.00	5.74
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.73**	**5.73**	**0.00**	**0.00**	**5.74**

3.5 Paving - 2012

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	0.25	1.51	0.90	0.00		0.13	0.13		0.13	0.13	0.00	112.46	112.46	0.02	0.00	112.89
Paving	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**1.51**	**0.90**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**112.46**	**112.46**	**0.02**	**0.00**	**112.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.73	5.73	0.00	0.00	5.74
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**5.73**	**5.73**	**0.00**	**0.00**	**5.74**

3.6 Building Construction - 2012

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	0.52	3.51	2.21	0.00		0.24	0.24		0.24	0.24	0.00	343.78	343.78	0.04	0.00	344.68
Total	**0.52**	**3.51**	**2.21**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**343.78**	**343.78**	**0.04**	**0.00**	**344.68**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.32	3.97	2.09	0.01	0.19	0.13	0.32	0.02	0.13	0.15	0.00	556.35	556.35	0.01	0.00	556.65
Worker	0.50	0.64	6.66	0.01	1.19	0.04	1.23	0.05	0.04	0.09	0.00	897.63	897.63	0.06	0.00	898.80
Total	**0.82**	**4.61**	**8.75**	**0.02**	**1.38**	**0.17**	**1.55**	**0.07**	**0.17**	**0.24**	**0.00**	**1,453.98**	**1,453.98**	**0.07**	**0.00**	**1,455.45**

3.6 Building Construction - 2012

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	0.52	3.51	2.21	0.00		0.24	0.24		0.24	0.24	0.00	343.78	343.78	0.04	0.00	344.68
Total	**0.52**	**3.51**	**2.21**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**343.78**	**343.78**	**0.04**	**0.00**	**344.68**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.32	3.97	2.09	0.01	0.19	0.13	0.32	0.02	0.13	0.15	0.00	556.35	556.35	0.01	0.00	556.65
Worker	0.50	0.64	6.66	0.01	1.19	0.04	1.23	0.05	0.04	0.09	0.00	897.63	897.63	0.06	0.00	898.80
Total	**0.82**	**4.61**	**8.75**	**0.02**	**1.38**	**0.17**	**1.55**	**0.07**	**0.17**	**0.24**	**0.00**	**1,453.98**	**1,453.98**	**0.07**	**0.00**	**1,455.45**

3.6 Building Construction - 2013

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	0.72	4.83	3.24	0.01		0.32	0.32		0.32	0.32	0.00	509.81	509.81	0.06	0.00	511.03
Total	**0.72**	**4.83**	**3.24**	**0.01**		**0.32**	**0.32**		**0.32**	**0.32**	**0.00**	**509.81**	**509.81**	**0.06**	**0.00**	**511.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.44	5.37	2.88	0.01	0.28	0.17	0.46	0.02	0.17	0.20	0.00	825.81	825.81	0.02	0.00	826.21
Worker	0.68	0.86	9.01	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,301.85	1,301.85	0.08	0.00	1,303.44
Total	**1.12**	**6.23**	**11.89**	**0.02**	**2.04**	**0.24**	**2.29**	**0.09**	**0.24**	**0.34**	**0.00**	**2,127.66**	**2,127.66**	**0.10**	**0.00**	**2,129.65**

3.6 Building Construction - 2013

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	0.72	4.83	3.24	0.01		0.32	0.32		0.32	0.32	0.00	509.81	509.81	0.06	0.00	511.03
Total	**0.72**	**4.83**	**3.24**	**0.01**		**0.32**	**0.32**		**0.32**	**0.32**	**0.00**	**509.81**	**509.81**	**0.06**	**0.00**	**511.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.44	5.37	2.88	0.01	0.28	0.17	0.46	0.02	0.17	0.20	0.00	825.81	825.81	0.02	0.00	826.21
Worker	0.68	0.86	9.01	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,301.85	1,301.85	0.08	0.00	1,303.44
Total	**1.12**	**6.23**	**11.89**	**0.02**	**2.04**	**0.24**	**2.29**	**0.09**	**0.24**	**0.34**	**0.00**	**2,127.66**	**2,127.66**	**0.10**	**0.00**	**2,129.65**

3.6 Building Construction - 2014

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	0.66	4.47	3.20	0.01		0.28	0.28		0.28	0.28	0.00	509.81	509.81	0.05	0.00	510.93
Total	**0.66**	**4.47**	**3.20**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**509.81**	**509.81**	**0.05**	**0.00**	**510.93**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.40	4.89	2.68	0.01	0.28	0.16	0.44	0.02	0.16	0.18	0.00	828.55	828.55	0.02	0.00	828.92
Worker	0.62	0.77	8.25	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,278.54	1,278.54	0.07	0.00	1,280.02
Total	**1.02**	**5.66**	**10.93**	**0.02**	**2.04**	**0.23**	**2.27**	**0.09**	**0.23**	**0.32**	**0.00**	**2,107.09**	**2,107.09**	**0.09**	**0.00**	**2,108.94**

3.6 Building Construction - 2014

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	0.66	4.47	3.20	0.01		0.28	0.28		0.28	0.28	0.00	509.81	509.81	0.05	0.00	510.93
Total	**0.66**	**4.47**	**3.20**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**509.81**	**509.81**	**0.05**	**0.00**	**510.93**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.40	4.89	2.68	0.01	0.28	0.16	0.44	0.02	0.16	0.18	0.00	828.55	828.55	0.02	0.00	828.92
Worker	0.62	0.77	8.25	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,278.54	1,278.54	0.07	0.00	1,280.02
Total	**1.02**	**5.66**	**10.93**	**0.02**	**2.04**	**0.23**	**2.27**	**0.09**	**0.23**	**0.32**	**0.00**	**2,107.09**	**2,107.09**	**0.09**	**0.00**	**2,108.94**

3.6 Building Construction - 2015

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	0.60	4.06	3.17	0.01		0.25	0.25		0.25	0.25	0.00	509.81	509.81	0.05	0.00	510.84
Total	**0.60**	**4.06**	**3.17**	**0.01**		**0.25**	**0.25**		**0.25**	**0.25**	**0.00**	**509.81**	**509.81**	**0.05**	**0.00**	**510.84**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.37	4.46	2.49	0.01	0.28	0.14	0.42	0.02	0.14	0.17	0.00	829.29	829.29	0.02	0.00	829.63
Worker	0.57	0.70	7.52	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,248.10	1,248.10	0.06	0.00	1,249.46
Total	**0.94**	**5.16**	**10.01**	**0.02**	**2.04**	**0.21**	**2.25**	**0.09**	**0.21**	**0.31**	**0.00**	**2,077.39**	**2,077.39**	**0.08**	**0.00**	**2,079.09**

3.6 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.60	4.06	3.17	0.01		0.25	0.25		0.25	0.25	0.00	509.81	509.81	0.05	0.00	510.84
Total	**0.60**	**4.06**	**3.17**	**0.01**		**0.25**	**0.25**		**0.25**	**0.25**	**0.00**	**509.81**	**509.81**	**0.05**	**0.00**	**510.84**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.37	4.46	2.49	0.01	0.28	0.14	0.42	0.02	0.14	0.17	0.00	829.29	829.29	0.02	0.00	829.63
Worker	0.57	0.70	7.52	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,248.10	1,248.10	0.06	0.00	1,249.46
Total	**0.94**	**5.16**	**10.01**	**0.02**	**2.04**	**0.21**	**2.25**	**0.09**	**0.21**	**0.31**	**0.00**	**2,077.39**	**2,077.39**	**0.08**	**0.00**	**2,079.09**

3.6 Building Construction - 2016

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	0.55	3.70	3.14	0.01		0.22	0.22		0.22	0.22	0.00	509.81	509.81	0.04	0.00	510.75
Total	**0.55**	**3.70**	**3.14**	**0.01**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**509.81**	**509.81**	**0.04**	**0.00**	**510.75**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.34	4.07	2.34	0.01	0.28	0.13	0.41	0.02	0.13	0.15	0.00	833.31	833.31	0.02	0.00	833.63
Worker	0.54	0.64	7.03	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,234.58	1,234.58	0.06	0.00	1,235.88
Total	**0.88**	**4.71**	**9.37**	**0.02**	**2.04**	**0.20**	**2.24**	**0.09**	**0.20**	**0.29**	**0.00**	**2,067.89**	**2,067.89**	**0.08**	**0.00**	**2,069.51**

3.6 Building Construction - 2016

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	0.55	3.70	3.14	0.01		0.22	0.22		0.22	0.22	0.00	509.81	509.81	0.04	0.00	510.75
Total	**0.55**	**3.70**	**3.14**	**0.01**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**509.81**	**509.81**	**0.04**	**0.00**	**510.75**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.34	4.07	2.34	0.01	0.28	0.13	0.41	0.02	0.13	0.15	0.00	833.31	833.31	0.02	0.00	833.63
Worker	0.54	0.64	7.03	0.01	1.76	0.07	1.83	0.07	0.07	0.14	0.00	1,234.58	1,234.58	0.06	0.00	1,235.88
Total	**0.88**	**4.71**	**9.37**	**0.02**	**2.04**	**0.20**	**2.24**	**0.09**	**0.20**	**0.29**	**0.00**	**2,067.89**	**2,067.89**	**0.08**	**0.00**	**2,069.51**

3.6 Building Construction - 2017

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	0.50	3.34	3.11	0.01		0.19	0.19		0.19	0.19	0.00	507.86	507.86	0.04	0.00	508.72
Total	**0.50**	**3.34**	**3.11**	**0.01**		**0.19**	**0.19**		**0.19**	**0.19**	**0.00**	**507.86**	**507.86**	**0.04**	**0.00**	**508.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.31	3.74	2.17	0.01	0.28	0.11	0.40	0.02	0.11	0.14	0.00	830.79	830.79	0.01	0.00	831.08
Worker	0.49	0.58	6.44	0.01	1.75	0.07	1.83	0.07	0.07	0.14	0.00	1,202.46	1,202.46	0.06	0.00	1,203.65
Total	**0.80**	**4.32**	**8.61**	**0.02**	**2.03**	**0.18**	**2.23**	**0.09**	**0.18**	**0.28**	**0.00**	**2,033.25**	**2,033.25**	**0.07**	**0.00**	**2,034.73**

3.6 Building Construction - 2017

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	0.50	3.34	3.11	0.01		0.19	0.19		0.19	0.19	0.00	507.86	507.86	0.04	0.00	508.72
Total	**0.50**	**3.34**	**3.11**	**0.01**		**0.19**	**0.19**		**0.19**	**0.19**	**0.00**	**507.86**	**507.86**	**0.04**	**0.00**	**508.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.31	3.74	2.17	0.01	0.28	0.11	0.40	0.02	0.11	0.14	0.00	830.79	830.79	0.01	0.00	831.08
Worker	0.49	0.58	6.44	0.01	1.75	0.07	1.83	0.07	0.07	0.14	0.00	1,202.46	1,202.46	0.06	0.00	1,203.65
Total	**0.80**	**4.32**	**8.61**	**0.02**	**2.03**	**0.18**	**2.23**	**0.09**	**0.18**	**0.28**	**0.00**	**2,033.25**	**2,033.25**	**0.07**	**0.00**	**2,034.73**

3.6 Building Construction - 2018

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	0.46	3.04	3.10	0.01		0.17	0.17		0.17	0.17	0.00	509.81	509.81	0.04	0.00	510.60
Total	**0.46**	**3.04**	**3.10**	**0.01**		**0.17**	**0.17**		**0.17**	**0.17**	**0.00**	**509.81**	**509.81**	**0.04**	**0.00**	**510.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.29	3.48	2.05	0.01	0.28	0.10	0.39	0.01	0.10	0.10	0.00	834.66	834.66	0.01	0.00	834.93
Worker	0.46	0.53	5.96	0.01	1.76	0.07	1.83	0.03	0.07	0.09	0.00	1,181.28	1,181.28	0.05	0.00	1,182.39
Total	**0.75**	**4.01**	**8.01**	**0.02**	**2.04**	**0.17**	**2.22**	**0.04**	**0.17**	**0.19**	**0.00**	**2,015.94**	**2,015.94**	**0.06**	**0.00**	**2,017.32**

3.6 Building Construction - 2018

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	0.46	3.04	3.10	0.01		0.17	0.17		0.17	0.17	0.00	509.81	509.81	0.04	0.00	510.60
Total	**0.46**	**3.04**	**3.10**	**0.01**		**0.17**	**0.17**		**0.17**	**0.17**	**0.00**	**509.81**	**509.81**	**0.04**	**0.00**	**510.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.29	3.48	2.05	0.01	0.28	0.10	0.39	0.01	0.10	0.10	0.00	834.66	834.66	0.01	0.00	834.93
Worker	0.46	0.53	5.96	0.01	1.76	0.07	1.83	0.03	0.07	0.09	0.00	1,181.28	1,181.28	0.05	0.00	1,182.39
Total	**0.75**	**4.01**	**8.01**	**0.02**	**2.04**	**0.17**	**2.22**	**0.04**	**0.17**	**0.19**	**0.00**	**2,015.94**	**2,015.94**	**0.06**	**0.00**	**2,017.32**

3.6 Building Construction - 2019

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	0.14	0.91	1.02	0.00		0.05	0.05		0.05	0.05	0.00	167.98	167.98	0.01	0.00	168.22
Total	**0.14**	**0.91**	**1.02**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**167.98**	**167.98**	**0.01**	**0.00**	**168.22**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.09	1.07	0.64	0.00	0.09	0.03	0.12	0.00	0.03	0.03	0.00	275.23	275.23	0.00	0.00	275.31
Worker	0.14	0.16	1.82	0.00	0.58	0.02	0.60	0.01	0.02	0.03	0.00	381.41	381.41	0.02	0.00	381.76
Total	**0.23**	**1.23**	**2.46**	**0.00**	**0.67**	**0.05**	**0.72**	**0.01**	**0.05**	**0.06**	**0.00**	**656.64**	**656.64**	**0.02**	**0.00**	**657.07**

3.6 Building Construction - 2019

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	0.14	0.91	1.02	0.00		0.05	0.05		0.05	0.05	0.00	167.98	167.98	0.01	0.00	168.22
Total	**0.14**	**0.91**	**1.02**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**167.98**	**167.98**	**0.01**	**0.00**	**168.22**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.09	1.07	0.64	0.00	0.09	0.03	0.12	0.00	0.03	0.03	0.00	275.23	275.23	0.00	0.00	275.31
Worker	0.14	0.16	1.82	0.00	0.58	0.02	0.60	0.01	0.02	0.03	0.00	381.41	381.41	0.02	0.00	381.76
Total	**0.23**	**1.23**	**2.46**	**0.00**	**0.67**	**0.05**	**0.72**	**0.01**	**0.05**	**0.06**	**0.00**	**656.64**	**656.64**	**0.02**	**0.00**	**657.07**

3.7 Painting Phase 1 - 2012

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	3.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.28	0.17	0.00		0.03	0.03		0.03	0.03	0.00	22.44	22.44	0.00	0.00	22.52
Total	**4.03**	**0.28**	**0.17**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**22.44**	**22.44**	**0.00**	**0.00**	**22.52**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.10	0.13	1.33	0.00	0.24	0.01	0.25	0.01	0.01	0.02	0.00	179.68	179.68	0.01	0.00	179.92
Total	**0.10**	**0.13**	**1.33**	**0.00**	**0.24**	**0.01**	**0.25**	**0.01**	**0.01**	**0.02**	**0.00**	**179.68**	**179.68**	**0.01**	**0.00**	**179.92**

3.7 Painting Phase 1 - 2012

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	3.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.28	0.17	0.00		0.03	0.03		0.03	0.03	0.00	22.44	22.44	0.00	0.00	22.52
Total	**4.03**	**0.28**	**0.17**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**22.44**	**22.44**	**0.00**	**0.00**	**22.52**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.10	0.13	1.33	0.00	0.24	0.01	0.25	0.01	0.01	0.02	0.00	179.68	179.68	0.01	0.00	179.92
Total	**0.10**	**0.13**	**1.33**	**0.00**	**0.24**	**0.01**	**0.25**	**0.01**	**0.01**	**0.02**	**0.00**	**179.68**	**179.68**	**0.01**	**0.00**	**179.92**

3.7 Painting Phase 1 - 2013

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	5.91					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.39	0.25	0.00		0.04	0.04		0.04	0.04	0.00	33.28	33.28	0.01	0.00	33.39
Total	**5.97**	**0.39**	**0.25**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**33.28**	**33.28**	**0.01**	**0.00**	**33.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.14	0.17	1.80	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	260.60	260.60	0.02	0.00	260.92
Total	**0.14**	**0.17**	**1.80**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**260.60**	**260.60**	**0.02**	**0.00**	**260.92**

3.7 Painting Phase 1 - 2013

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	5.91					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.39	0.25	0.00		0.04	0.04		0.04	0.04	0.00	33.28	33.28	0.01	0.00	33.39
Total	**5.97**	**0.39**	**0.25**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**33.28**	**33.28**	**0.01**	**0.00**	**33.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.14	0.17	1.80	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	260.60	260.60	0.02	0.00	260.92
Total	**0.14**	**0.17**	**1.80**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**260.60**	**260.60**	**0.02**	**0.00**	**260.92**

3.7 Painting Phase 1 - 2014

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	4.12					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.25	0.17	0.00		0.02	0.02		0.02	0.02	0.00	23.21	23.21	0.00	0.00	23.28
Total	**4.16**	**0.25**	**0.17**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**23.21**	**23.21**	**0.00**	**0.00**	**23.28**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.09	0.11	1.15	0.00	0.25	0.01	0.26	0.01	0.01	0.02	0.00	178.47	178.47	0.01	0.00	178.67
Total	**0.09**	**0.11**	**1.15**	**0.00**	**0.25**	**0.01**	**0.26**	**0.01**	**0.01**	**0.02**	**0.00**	**178.47**	**178.47**	**0.01**	**0.00**	**178.67**

3.7 Painting Phase 1 - 2014

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	4.12					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.25	0.17	0.00		0.02	0.02		0.02	0.02	0.00	23.21	23.21	0.00	0.00	23.28
Total	**4.16**	**0.25**	**0.17**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**23.21**	**23.21**	**0.00**	**0.00**	**23.28**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.09	0.11	1.15	0.00	0.25	0.01	0.26	0.01	0.01	0.02	0.00	178.47	178.47	0.01	0.00	178.67
Total	**0.09**	**0.11**	**1.15**	**0.00**	**0.25**	**0.01**	**0.26**	**0.01**	**0.01**	**0.02**	**0.00**	**178.47**	**178.47**	**0.01**	**0.00**	**178.67**

3.8 Painting Phase 2 - 2015

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	2.55					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.22	0.17	0.00		0.02	0.02		0.02	0.02	0.00	22.31	22.31	0.00	0.00	22.38
Total	**2.59**	**0.22**	**0.17**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**22.31**	**22.31**	**0.00**	**0.00**	**22.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.08	0.09	1.01	0.00	0.24	0.01	0.25	0.01	0.01	0.02	0.00	167.52	167.52	0.01	0.00	167.70
Total	**0.08**	**0.09**	**1.01**	**0.00**	**0.24**	**0.01**	**0.25**	**0.01**	**0.01**	**0.02**	**0.00**	**167.52**	**167.52**	**0.01**	**0.00**	**167.70**

3.8 Painting Phase 2 - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.55					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.22	0.17	0.00		0.02	0.02		0.02	0.02	0.00	22.31	22.31	0.00	0.00	22.38
Total	**2.59**	**0.22**	**0.17**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**22.31**	**22.31**	**0.00**	**0.00**	**22.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.08	0.09	1.01	0.00	0.24	0.01	0.25	0.01	0.01	0.02	0.00	167.52	167.52	0.01	0.00	167.70
Total	**0.08**	**0.09**	**1.01**	**0.00**	**0.24**	**0.01**	**0.25**	**0.01**	**0.01**	**0.02**	**0.00**	**167.52**	**167.52**	**0.01**	**0.00**	**167.70**

3.8 Painting Phase 2 - 2016

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	3.80					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.31	0.25	0.00		0.03	0.03		0.03	0.03	0.00	33.28	33.28	0.00	0.00	33.36
Total	**3.85**	**0.31**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.28**	**33.28**	**0.00**	**0.00**	**33.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.11	0.13	1.41	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	247.13	247.13	0.01	0.00	247.39
Total	**0.11**	**0.13**	**1.41**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**247.13**	**247.13**	**0.01**	**0.00**	**247.39**

3.8 Painting Phase 2 - 2016

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	3.80					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.31	0.25	0.00		0.03	0.03		0.03	0.03	0.00	33.28	33.28	0.00	0.00	33.36
Total	**3.85**	**0.31**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.28**	**33.28**	**0.00**	**0.00**	**33.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.11	0.13	1.41	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	247.13	247.13	0.01	0.00	247.39
Total	**0.11**	**0.13**	**1.41**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**247.13**	**247.13**	**0.01**	**0.00**	**247.39**

3.8 Painting Phase 2 - 2017

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	3.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.28	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.15	33.15	0.00	0.00	33.23
Total	**3.83**	**0.28**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.15**	**33.15**	**0.00**	**0.00**	**33.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.10	0.12	1.29	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	240.70	240.70	0.01	0.00	240.94
Total	**0.10**	**0.12**	**1.29**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**240.70**	**240.70**	**0.01**	**0.00**	**240.94**

3.8 Painting Phase 2 - 2017

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	3.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.28	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.15	33.15	0.00	0.00	33.23
Total	**3.83**	**0.28**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.15**	**33.15**	**0.00**	**0.00**	**33.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.10	0.12	1.29	0.00	0.35	0.01	0.37	0.01	0.01	0.03	0.00	240.70	240.70	0.01	0.00	240.94
Total	**0.10**	**0.12**	**1.29**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.03**	**0.00**	**240.70**	**240.70**	**0.01**	**0.00**	**240.94**

3.8 Painting Phase 2 - 2018

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	3.80					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.26	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.28	33.28	0.00	0.00	33.35
Total	**3.84**	**0.26**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.28**	**33.28**	**0.00**	**0.00**	**33.35**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.09	0.11	1.19	0.00	0.35	0.01	0.37	0.01	0.01	0.02	0.00	236.46	236.46	0.01	0.00	236.69
Total	**0.09**	**0.11**	**1.19**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.02**	**0.00**	**236.46**	**236.46**	**0.01**	**0.00**	**236.69**

3.8 Painting Phase 2 - 2018

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	3.80					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.26	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.28	33.28	0.00	0.00	33.35
Total	**3.84**	**0.26**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.28**	**33.28**	**0.00**	**0.00**	**33.35**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.09	0.11	1.19	0.00	0.35	0.01	0.37	0.01	0.01	0.02	0.00	236.46	236.46	0.01	0.00	236.69
Total	**0.09**	**0.11**	**1.19**	**0.00**	**0.35**	**0.01**	**0.37**	**0.01**	**0.01**	**0.02**	**0.00**	**236.46**	**236.46**	**0.01**	**0.00**	**236.69**

3.8 Painting Phase 2 - 2019

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	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.51	0.51	0.00	0.00	0.51
Total	**0.06**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.51**	**0.51**	**0.00**	**0.00**	**0.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.55	3.55	0.00	0.00	3.55
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.55**	**3.55**	**0.00**	**0.00**	**3.55**

3.8 Painting Phase 2 - 2019

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	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.51	0.51	0.00	0.00	0.51
Total	**0.06**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.51**	**0.51**	**0.00**	**0.00**	**0.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.55	3.55	0.00	0.00	3.55
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.55**	**3.55**	**0.00**	**0.00**	**3.55**

4.0 Mobile Detail

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	16.74	41.66	170.63	0.36	36.32	1.99	38.32	0.57	1.92	2.48	0.00	28,376.74	28,376.74	1.24	0.00	28,402.80
Unmitigated	16.84	41.92	171.90	0.36	36.69	2.01	38.70	0.57	1.94	2.51	0.00	28,650.34	28,650.34	1.25	0.00	28,676.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	6.36	6.36	6.36	13,578	13,442
Condo/Townhouse	6,228.32	7,675.52	6507.04	18,389,436	18,205,542
General Office Building	888.54	139.83	57.82	1,584,184	1,568,342
Other Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	16,625.02	19,808.11	10005.14	28,287,901	28,005,022
Single Family Housing	5,253.93	5,533.92	4814.73	14,857,195	14,708,623
Strip Mall	2,614.88	2,480.36	1205.37	3,687,308	3,650,435
User Defined Recreational	0.00	0.00	0.00		
Total	31,617.05	35,644.10	22,596.46	66,819,602	66,151,406

4.3 Trip Type Information

	Miles			Trip %		
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
City Park	9.50	7.30	7.30	33.00	48.00	19.00
Condo/Townhouse	10.80	7.30	7.50	40.20	19.20	40.60
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	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						0.00	0.00		0.00	0.00	0.00	9,149.94	9,149.94	0.20	0.07	9,177.26
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	10,385.93	10,385.93	0.22	0.08	10,416.94
NaturalGas Mitigated	0.23	1.96	0.85	0.01		0.00	0.16		0.00	0.16	0.00	2,260.95	2,260.95	0.04	0.04	2,274.71
NaturalGas Unmitigated	0.28	2.36	1.03	0.02		0.00	0.19		0.00	0.19	0.00	2,732.51	2,732.51	0.05	0.05	2,749.14
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	2.76853e+007	0.15	1.28	0.54	0.01		0.00	0.10		0.00	0.10	0.00	1,477.39	1,477.39	0.03	0.03	1,486.38
General Office Building	215350	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.49	11.49	0.00	0.00	11.56
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Regional Shopping Center	919648	0.00	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	49.08	49.08	0.00	0.00	49.37
Single Family Housing	2.22481e+007	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08	0.00	1,187.24	1,187.24	0.02	0.02	1,194.47
Strip Mall	136880	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.30	7.30	0.00	0.00	7.35
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.27**	**2.38**	**1.04**	**0.02**		**0.00**	**0.18**		**0.00**	**0.18**	**0.00**	**2,732.50**	**2,732.50**	**0.05**	**0.05**	**2,749.13**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Condo/Townhouse	2.28731e+007	0.12	1.05	0.45	0.01		0.00	0.09		0.00	0.09	0.00	1,220.60	1,220.60	0.02	0.02	1,228.03
General Office Building	172280	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	9.19	9.19	0.00	0.00	9.25
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Regional Shopping Center	759502	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	40.53	40.53	0.00	0.00	40.78
Single Family Housing	1.84507e+007	0.10	0.85	0.36	0.01		0.00	0.07		0.00	0.07	0.00	984.60	984.60	0.02	0.02	990.59
Strip Mall	113044	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.03	6.03	0.00	0.00	6.07
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.22**	**1.96**	**0.85**	**0.02**		**0.00**	**0.16**		**0.00**	**0.16**	**0.00**	**2,260.95**	**2,260.95**	**0.04**	**0.04**	**2,274.72**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	5.29432e+006					3,232.73	0.07	0.03	3,242.38
General Office Building	630710					385.11	0.01	0.00	386.26
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Regional Shopping Center	6.20762e+006					3,790.40	0.08	0.03	3,801.71
Single Family Housing	3.9527e+006					2,413.53	0.05	0.02	2,420.74
Strip Mall	923940					564.16	0.01	0.00	565.85
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**10,385.93**	**0.22**	**0.08**	**10,416.94**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	4.86646e+006					2,971.48	0.06	0.02	2,980.35
General Office Building	537490					328.19	0.01	0.00	329.17
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Regional Shopping Center	5.15954e+006					3,150.43	0.07	0.03	3,159.84
Single Family Housing	3.65365e+006					2,230.93	0.05	0.02	2,237.59
Strip Mall	767944					468.91	0.01	0.00	470.31
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**9,149.94**	**0.20**	**0.07**	**9,177.26**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	11.58	0.29	24.80	0.00		0.00	0.22		0.00	0.22	0.00	1,208.11	1,208.11	0.06	0.02	1,216.04
Unmitigated	11.58	0.29	24.80	0.00		0.00	0.22		0.00	0.22	0.00	1,208.11	1,208.11	0.06	0.02	1,216.04
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.40					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	9.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.12	0.00	0.01	0.00		0.00	0.08		0.00	0.08	0.00	1,167.79	1,167.79	0.02	0.02	1,174.89
Landscaping	0.76	0.29	24.80	0.00		0.00	0.14		0.00	0.14	0.00	40.32	40.32	0.04	0.00	41.15
Total	**11.58**	**0.29**	**24.81**	**0.00**		**0.00**	**0.22**		**0.00**	**0.22**	**0.00**	**1,208.11**	**1,208.11**	**0.06**	**0.02**	**1,216.04**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.40					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	9.30					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.12	0.00	0.01	0.00		0.00	0.08		0.00	0.08	0.00	1,167.79	1,167.79	0.02	0.02	1,174.89
Landscaping	0.76	0.29	24.80	0.00		0.00	0.14		0.00	0.14	0.00	40.32	40.32	0.04	0.00	41.15
Total	**11.58**	**0.29**	**24.81**	**0.00**		**0.00**	**0.22**		**0.00**	**0.22**	**0.00**	**1,208.11**	**1,208.11**	**0.06**	**0.02**	**1,216.04**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,503.43	3.69	0.10	1,612.88
Unmitigated					1,860.83	4.61	0.13	1,997.59
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.76593					32.33	0.00	0.00	32.43
Condo/Townhouse	69.8451 / 44.0328					854.81	2.15	0.06	918.52
General Office Building	10.4863 / 6.42708					127.09	0.32	0.01	136.65
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Regional Shopping Center	29.3623 / 17.9963					355.86	0.90	0.03	382.64
Single Family Housing	35.7696 / 22.5504					437.77	1.10	0.03	470.40
Strip Mall	4.37028 / 2.67856					52.97	0.13	0.00	56.95
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**1,860.83**	**4.60**	**0.13**	**1,997.59**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.91812					26.58	0.00	0.00	26.66
Condo/Townhouse	55.8761 / 36.1998					690.45	1.72	0.05	741.44
General Office Building	8.38903 / 5.28377					102.64	0.26	0.01	110.29
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Regional Shopping Center	23.4899 / 14.7949					287.39	0.72	0.02	308.82
Single Family Housing	28.6156 / 18.5389					353.60	0.88	0.02	379.71
Strip Mall	3.49622 / 2.20207					42.77	0.11	0.00	45.96
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**1,503.43**	**3.69**	**0.10**	**1,612.88**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					339.04	20.04	0.00	759.80
Unmitigated					339.04	20.04	0.00	759.80
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.34					0.07	0.00	0.00	0.15
Condo/Townhouse	493.12					100.10	5.92	0.00	224.33
General Office Building	54.87					11.14	0.66	0.00	24.96
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Regional Shopping Center	416.22					84.49	4.99	0.00	189.35
Single Family Housing	643.7					130.67	7.72	0.00	292.83
Strip Mall	61.95					12.58	0.74	0.00	28.18
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**339.05**	**20.03**	**0.00**	**759.80**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.34					0.07	0.00	0.00	0.15
Condo/Townhouse	493.12					100.10	5.92	0.00	224.33
General Office Building	54.87					11.14	0.66	0.00	24.96
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Regional Shopping Center	416.22					84.49	4.99	0.00	189.35
Single Family Housing	643.7					130.67	7.72	0.00	292.83
Strip Mall	61.95					12.58	0.74	0.00	28.18
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**339.05**	**20.03**	**0.00**	**759.80**

9.0 Vegetation